LG-NORTEL

ipLDK

# ipLDK-20/100/300/300E

# Feature Description and Operation Manual

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# 1 INTRODUCTION

This Programming Manual is designed to provide general system features and ADMIN Programming using a DKTU and PC for the ipLDK. This manual contains the following sections.

## 1.1 Manual Usage

This section is a functional listing of features with the description and operation of each. The structure is divided into 5 parts as listed:

- **Description:** explains the nature of the feature.
- **Operation:** describes how to use the feature.
- **Condition:** explains any requirements or constraints of the feature related to its configuration.
- **Reference:** lists related topic information to aid in understanding the feature.
- **Admin Programming:** descriptions and instructions for setting-up System and features.

# 2 SYSTEM FEATURE

## 2.1 Incoming Call

### 2.1.1 Ring Assignment

**Description**

A pre-assigned destination receives incoming calls through the CO Line. The destination (refer to Figure 2.1.1) can be a Station (Ex. 1), Hunt Group (Ex. 2), VMIB Announcement (Ex. 3) or Net Station(Ex.4). If a destination station is busy, the incoming call returns a muted ring signal, so the station user can pickup the incoming CO Call as needed.

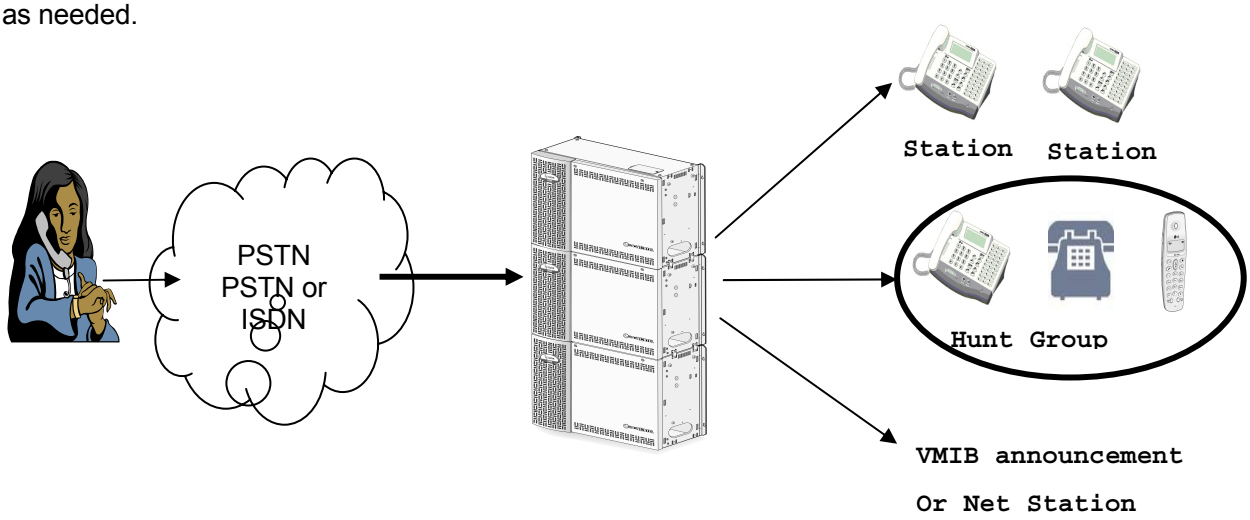



**Figure 2.1.1 Ring Assignment Destination**

**Operation**

***Ex. 1*** *When there's an incoming CO Call through CO Lines 1 – 8 during Day mode, the Stations 100 – 105 (as available) start to ring instantly. If one of the stations answers the call, other stations stop ringing. After 9 seconds, if the call is still not answered, station 110 (Attendant) starts to ring.*

1. Set CO Service Type as Normal at the ADMIN 140 menu item.
2. At ADMIN 144, select CO Line Range 01 – 08 and press FLEX 1 for Day Mode.
3. Dial 1 for the Station, and enter the station range 100105.
4. Press 0 to make the stations ring instantly when there is an incoming call.
5. To save changes, press the **[HOLD/SAVE]** button.
6. Press FLEX 1 for Day Mode again without exiting ADMIN 144, and press 1 for the Station again.
7. Enter Station Range as 110110, and dial 3 as the delay value. Press **[HOLD/SAVE]** again.

***Ex. 2*** *When there's an incoming CO Call through CO Lines 1 – 8 during Night mode, the Hunt Group starts to ring. The ringing station is decided by the Hunt Group type (refer to Ref. A).*

1. Verify the CO Service type is set to Normal at ADMIN 140.
2. Check if Hunt Group 620 is assigned properly at ADMIN 190.
3. At ADMIN 144, select CO Line range 01 – 08 and press FLEX 2 (Night Mode).
4. Dial 2 for the Hunt, and enter Hunt Group Number 620.
5. To save changes, press the [HOLD/SAVE] button.

***Ex. 3*** *When there's an incoming CO Call through CO Lines 1 – 8 during Weekend mode, the VMIB announcement played and the line will be released.*

1. Check if CO Service type is set to Normal at ADMIN 140.
2. Check if VMIB Announcement 01 is recorded properly at the System Attendant Station(refer to Ref. B).
3. At ADMIN 144, select CO Line range 01 – 08 and press FLEX 3 for Weekend Mode.
4. Dial 3 for VMIB, and enter the VMIB Announcement Number 01.
5. Save the changed setting by pressing the **[HOLD/SAVE]** button.

***Ex. 4*** *When there's an incoming CO Call through CO Lines 1 – 8 during Lunch mode, the Net-Station 200 start to ring instantly.*

1. Set CO Service Type as Normal at the ADMIN 140 menu item.
2. At ADMIN 144, select CO Line Range 01 – 08 and press FLEX 4 for Lunch Mode.
3. Dial 4 for the Net-Station, and enter the Net-station Number 200.
4. To save changes, press the **[HOLD/SAVE]** button.

### Condition

- Any CO Line Ring Assignment can be programmed for multiple stations, or all stations. And each ring to station can be delayed by ADMIN programming. The ring assignment is individually applied to ring modes Day, Night, weekend or On-demand (refer to Ref. C). Every CO Line must be assigned to an Attendant Station by default (Ref. D).

### Reference

**A.** Hunt Group: 2.6

**B.** VMIB announcement: 2.11.1

**C.** Ring Mode: 2.13.8

**D.** System Attendant: 2.13

### Admin Programming

- CO Service Type (PGM 140 – FLEX 1)
- CO Ring Assignment (PGM 144)
- Weekly Time Table (PGM 233)
- Hunt Group (PGM 190)

## 2.1.2 Preferred Line Answer (PLA)

### Description

If PLA service is enabled and there are several incoming CO Calls (Transferred, Recalled, Queued, or Normal Incoming Call) at the same time, the first answered call can be chosen by setting the PLA priority.

***NOTE—****The default setting for answer order is:*
*Transferred Call → Recalled Call → Normal Incoming Call → CO Line Queued Call*

### Operation

If there's multiple CO Calls ringing at a station and the call is answered at one of the stations, the call with the highest priority automatically will be answered first.

**Condition**

- Automatic Speaker Select feature should be enabled.
- The Priority of CO Line for PLA can be changed by Admin Programming.

**Admin Programming**

- Preferred Line Answer (PGM 112 – FLEX 7)
- Automatic Speaker Selection (PGM 111 – FLEX 1)
- PLA Priority Setting (PGM 173)

## 2.1.3 Direct Inward Dialing (DID)

**Description**

This feature allows CO incoming calls to access a specific destination. This feature enables the caller direct access to a desired Station, Hunt group, VMIB announcement, Speed, or Page, bypassing the Attendant.

There are 3 types of DID Conversions that can be set by ADMIN Programming (ADMIN 143-FLEX 4):

- **Type 0**—In an incoming DID call, select digits which are received by ADMIN Programming; the selected digits will be converted using DID Conversion type (ADMIN 146 – FLEX 5/FLEX 6).
- **Type 1**—The incoming DID digits are the destination number; there is no conversion.
- **Type 2**—With result of DID Conversion type 1, convert by the Flexible DID table (ADMIN 231) additionally.

**Operation**

***Ex. 1*** *To make a DID call by DID Digit Conversion(DID type 0), perform the following:*

1. Check if DID Digit Receive Number is set to 3 at ADMIN 146.
2. Set DID Conversion Type to 0 (using Digit Mask) at ADMIN 143 and press FLEX 4.
3. Set DID Digit Mask by pressing #1**. The first digit 2 is ignored and second digit 6 is converted to 1 and the last two digits are bypassed. (# : Ignore, *: bypass)

***Ex. 2*** *To make a DID call using the Flexible DID Table(DID type 2), perform the following:*

1. Verify that DID Digit Receive Number is set to 3 at ADMIN 146.
2. Set DID Conversion Type as 2 (using Flexible DID Table) at ADMIN 143 and press FLEX 4.
3. Program Flexible DID Table as shown in the ADMIN 231 Flex DID Conversion Table.

**ADMIN 231 FLEX DID CONVERSION TABLE**

| | | | | | |
|---|---|---|---|---|---|
| 000 | DAY: Station 200 | NIGHT | WEEKEND | LUNCH | REROUTE |
| 001 | DAY: Hunt 620 | NIGHT | WEEKEND | LUNCH | REROUTE |
| 010 | DAY: Station 129 | NIGHT | WEEKEND | LUNCH | REROUTE |

**Condition**

- When a DID (Type 2) is received at a busy station, the call is automatically handled according to the reroute destination (refer to Flexible DID Table, and Ref. A).Destination of calls handled can be Station, Hunt group, VMIB announcement, Drop after VMIB announcement, System Speed (refer to Ref. B), Net Station, Station voice mail box.
- If the call is not answered or the number was invalid, the call is routed by DID/DISA Destination.
- DID calls to a busy station can be placed on a waiting stage according to admin programming to KTU and SLT.

**Reference**

**A.** Weekly Time Table (PGM223)

**B.** System Speed Dialing 2.2.8.5

**Admin Programming**

- DID Conversion Type (PGM 143 – FLEX 4)
- DID Digit Conversion Mask (PGM 146 – FLEX 2)
- Automatic Speaker Selection (PGM 111 – FLEX 1)
- DID/DISA Destination (PGM 167)
- DID Call Wait (PGM 114 – FLEX 17)
- DID Restriction (PGM 114 – FLEX 16)

## 2.1.4 Direct Inward System Access (DISA)

**Description**

The DISA feature allows incoming CO calls to access a specific destination, bypassing the attendant station. Compared with DID (refer to Ref. A), there is no digit conversion in DISA.

On accessing an incoming CO Line, the system will give the pre-recorded VMIB announcement (refer to Ref. B) or dial tone. The caller then is able to dial additional digits to access their desired destination on the system.

**Operation**

To program DISA Line Assignment, perform the following Steps:

1. Press **[TRANS/PGM]** and enter 140.
2. Select the CO Line Range to be assigned to DISA Line.
3. Press **[FLEX 2]**, and select the Ring type and press **[FLEX 1].**
4. To select the Ring Type, press **[FLEX 1]** for Day, **[FLEX 2]** for Night, **[FLEX 3]** for Weekend, **[FLEX 4]** for Lunch, or **[FLEX 5]** for On-demand.
5. Dial 1.
6. Press **[HOLD/SAVE]** to activate the DISA Line Assignment.
7. Press **[FLEX 2]**, select the Ring Type.
8. Press **[FLEX 2]** then enter 01 – 70 for the VMIB Greeting Assignment.
9. Press **[HOLD/SAVE]** to accept changes.

To use DISA Line Assignment, perform the following Steps:

1. Select the DISA Line you wish to use.
2. When the tone or announcement is heard, dial the desired station/ hunt group number.
3. After a connection with the system is made, dial the CO Access Code (Ex., 8801) to call again outside of the system by securing another CO Line.

**Condition**

- You can assign the VMIB announcement instead of the intercom dial tone on a DISA line.
- If the DISA Authorization Code is enabled for a DISA Line, a DND warning tone or VMIB announcement is heard, guiding the user to enter the DISA Authorization Code (refer to Ref. C), the dial tone then should be heard.
- Each DISA Line may be assigned as full-time DISA or Night Mode Only.
- Night mode DISA operates as a normal CO Line during Day mode.
- If the VMIB announcement number is stored with **#**, the CO Line will be dropped after the VMIB announcement is played.
- If the DISA Authorization Code is disabled, the permission is determined by *CO to CO COS* & *CO COS* (refer to Ref. D).
- If the DISA Authorization Code is enabled, the Authorization Code should be entered to access an outgoing CO Line. If the Authorization Code is matched with the Authorization Code of the station, the user may access the CO Line depending on *STA COS* & *CO COS*. If the Authorization Code is matched with the Authorization Code of system, it is determined by COS of Authorization code.
  1) If using old System Authorization Code (5 digits), the system CO-to-CO COS will be applied.

2) If using Extend System Authorization Code (3~11 digits), the individual Authorization COS will be applied. (In case of UK or Sweden, user can not access the CO line with station authorization. Only system authorization code can be permitted)

**Reference**

**A.** Direct Inward Dialing (DID): 2.1.3
**B.** VMIB Announcement: 2.11
**C.** Authorization Code: 2.5.2
**D.** Class of Service (COS): 2.5.4

**Admin Programming**

- DISA Line Assignment (PGM 140 – FLEX 2)
- DISA Account Code (PGM 141 – FLEX 3)
- DISA Retry Counter (PGM 160 – FLEX 4)
- CO-to-CO COS Assignment (PGM 166)
- Weekly Time Table (PGM 233)
- DISA Restriction (PGM 114 – FLEX 10)

## 2.1.5 Customer Call Routing (CCR) with VMIB

**Description**

CCR is the incoming CO Call type of DISA/DID (refer to Ref. A, Ref. B), the user can route the destination by pressing only one digit. If user presses a certain digit, the corresponding VMIB announcement is played. When the user presses the desired digit again, call routing is established.

CCR Reroute destination can be assigned by each VMIB announcement. There is three reroute destination. Busy destination, Error/Time out destination, and No answer destination. Each destination have three type – Tone, Attendant(Ring Assigned destination), Hunt group. Refer to below condition about CCR reroute destination

A user also may access the desired destination directly by dialing the Station or Hunt Group number (refer to Ref. C).

**Operation**

When a call is answered by a system programmed with CCR, a VMIB announcement should be heard by the caller. VMIB announcement gives a choice of destination; the caller may select a destination based on the information presented in the VMIB Announcement.

To program the CCR Table as described in Figure 2.1.5, perform the following Steps:

1. Select CCR Table 01 to match with the VMIB announcement number at ADMIN 228.
2. Press **[FLEX 1]** to set the Sales Dept. The Flexible button number should be the same as the dialing digit number.
3. Select Destination Type as Hunt Group by dialing 2. Enter the desired Hunt Group Number 620.
4. Press **[FLEX 2]** to set the Technical Dept.
5. Select destination type as VMIB by dialing 2 or 3 and enter Announcement Number 02.
6. Press **[FLEX 10]** to set the Operator. Select the destination type as Station by dialing 1 and enter the desired Station Number 101.

***NOTE**—If Destination 04 (VMIB Drop) is selected, the call will be dropped after the Announcement is played.*

To use DISA CCR, perform the following Steps:

1. Verify the CO Service Type is set to Normal at ADMIN 140.
2. Press **[FLEX 1].**
3. Verify the DISA Service is set to ON at ADMIN 140.
4. Press **[FLEX 2]** (refer to Ref. C).
5. Set VMIB Message Number to 01 ADMIN 140 and press **[FLEX 2]**.

To use DID CCR, perform the following Steps:

1. Verify the CO Service Type is set to DID/MSN at ADMIN 140.
2. Press **[FLEX 1].**
3. Verify the DID Digit Receive Number is set to 3 at ADMIN 146.
4. Set DID Conversion Type as 2 (using Flexible DID Table) at ADMIN 143.
5. Press **[FLEX 4].**
6. Set the Destination Type as 3 (VMIB).
7. Select Announcement Number 01 for the Flexible DID Table at ADMIN 231.

**Condition**

- To use the CCR feature for DID, VMIB should be assigned for Flexible DID Destination (ADMIN 231).
- The CCR feature is only supported for DID and DISA.
- If a caller dials a full destination number, the call will be directly routed to the desired destination by the system numbering plan.
- If a caller dials one digit then pauses, the ipLDK system will compare the digit with the CCR Table. If a matching digit is found on the CCR Table, and the bin number is the same as the VMIB Announcement, the call will be routed to the programmed destination.
- In PGM 228 - CCR table, if a CCR announcement has any valid destination, call can be rerouted to CCR destination. For example, VMIB announcement 2 is assigned to DISA announcement(PGM 140)
- Case 1) For announcement 2, any program is existed in PGM 228, call is routed to CCR destination.
- Case 2) For announcement 2, any program is not existed in PGM 228, call is routed to DID/DISA destination.
- If Destination is busy, the caller can attempt to redial up to DISA retry count. When the DISA retry count is over, the call will be routed to CCR Busy reroute Destination.
  If the dialed digit is invalid, or user did not dial any digit in proper time, the caller can attempt to redial up to DISA retry count (PGM 160 – Flex4). When the DISA Retry Counter is exceeded, the call will be routed to CCR ERROR reroute Destination.
- If Destination is no answer, the call will be routed to CCR No Answer reroute Destination.
- DISA retry count can be applied by each CCR announcement.
- VMIB announcement 01 – 70 may be used for CCR.
- Call routing will be operated with previously programmed VMIB announcement.
- The maximum CCR depth is 10.
- The external user can dial alternate digits while the VMIB announcement is being played or the digits should be entered within the Inter-digit Time (5 sec) after the announcement is ended.
- If the caller does not dial any digits within the Inter-digit Time (5 sec), the call will be routed to the Assigned Ring Station or disconnected following an error tone.
- If a user presses the **#** button while CCR is in operation, CCR will return to the first step of Operation.
- If a user presses the * button while CCR is in operation, CCR will return to the previous step.
- The call will be dropped directly after the VMIB announcement if *VMIB Drop* is selected at the CCR Table.
- If a call is routed to System Speed Dial, the call will be routed to the applicable Speed Dial destination. If the CO Call is assigned System Speed Dial, the routing will be the same as Incoming CO Off-net Call Forward.

**Reference**

**A.** Direct Inward Dial (DID): 2.1.3
**B.** Direct Inward System Access (DISA): 2.1.4
**C.** VMIB Announcement: 2.11
**D.** DISA Authorization Code: 2.5.2
**E.** System Speed Dial: 2.2.8.5

**Admin Programming**

- Flexible DID Table (PGM 231)
- DID Digit Conversion Table (PGM 146 – FLEX 5/ FLEX 6)
- DISA Retry Counter (PGM 160 – FLEX 4)
- CCR Inter-digit Timer (PGM 180 – FLEX 15)
- Inter-digit Timer (PGM 181 – FLEX 8)
- DID/DISA Destination (PGM 167)
- Custom Call Routing Table (PGM 228)

## 2.1.6 CO Line Name

**Description**

This feature allows the capability to name each CO Line. Stations with an LCD interface screen, including the Attendant Station, will display the programmed CO Line Name when incoming CO call in place of the default **LINE XXX** display (If nation is Turkey, all of incoming and outgoing CO call is displayed line Name).

**Condition**

This applies to all conditions where the **LINE XXX** message is displayed. However, SMDR will display the line number in place of the programmed name (refer to Ref. A).

- A CO Line Name can be assigned to each CO Line.
- Each CO Line Name can contain up to 12 characters.
- If the CO Line Name Display is set to OFF at ADMIN 142 with **[FLEX 1]** selected, the CO Line Name is not displayed even if the name is programmed.

**Reference**

**A.** Station Message Detail Recording (SMDR): 2.12

**Admin Programming**

- CO Line Name Display (PGM 142 – FLEX 1)
- CO Line Name Assignment (PGM 142 – FLEX 2)

## 2.1.7 Universal Answer (UNA)

**Description**

If the CO Line is programmed for UNA, any user can pick up incoming CO Calls by dialing the Universal Answer code 569 (refer to Ref. A), regardless of the pick-up group.

If there are incoming CO Calls, Station B can pick up the call even though Station A and B do not belong to a pick up group.

**Operation**

To pick-up a call, perform the following Steps:

1. Lift the handset or press the **[MON]** button.
2. The intercom dial tone should be heard.
3. Dial 5 6 9 for the Universal Answer code.
4. The call is connected.

**Condition**

- If there isn't an incoming CO Call, Universal Answer Code is dialed from a station, an error tone will be heard.
- If External Night Ringing is set to On, the call is routed to External Page (refer to Ref. B) by LBC1 (refer to Ref. C).

**Reference**

**A.** Refer **to ipLDK Installation Manual**, Universal Answer Code (PGM 107 – FLEX 4)

**B.** External Page: 2.8.1

**C.** Loud Bell: 2.10.3

**Admin Programming**

- Universal Answer (PGM 141 – FLEX 8)
- External Night Ring (PGM 160 – FLEX 7)

# 2.2 Outgoing Call Access

## 2.2.1 Basic Access

**Description**

Each station is allowed or denied access based on particular CO Lines or CO Groups. Station users may use Flexible buttons which are assigned as a **{CO}** button or **{CO Group}** button, including the **{POOL}** and **{LOOP}** buttons. According to the Numbering Plan, station users can access individual CO Lines by dialing CO Access Codes.

| Feature | Description | Operation method | Access code |
|---|---|---|---|
| Idle Line Access (88 + CO Line number) | Automatically selects an idle CO Line from the assigned CO Groups. | Dial the idle Line Access Number (9), or press a CO Line button. | 8801-8816 (ipLDK-20)<br>8801–8840 (ipLDK-100)<br>88001–88200 (ipLDK-300)<br>88001–88400 (ipLDK-300E) |
| CO Group Access (8 + CO Group number) | Selects an idle CO Line from the corresponding CO Group. | Dial the CO Group Access number and a CO Group number, or press a CO Group button. | 801-808(ipLDK-20)<br>801-824(ipLDK-100)<br>801-872(ipLDK-300/300E) |

- A user can dial 9 (refer to Ref. A) to access the first idle line in their CO group (refer to Ref. D).
- A user can dial 8801 (refer to Ref. B) to access CO Line 001 if it is idle.
- A user can dial 801 (refer to Ref. C) to access the first idle CO Line in CO Group 1.

**Operation**

To access a CO Line from a DKTU, perform the following Steps:

1. Lift the handset or press the **[MON]** button.
2. Press the desired CO Line, **{POOL}** button, or **{LOOP}** button.
   OR
3. Dial the individual CO Line Access Code, CO Group Access Code, or the first CO Line Access Code from the accessible group.

To access a CO Line from a SLT, perform the following Steps:

1. Lift the handset.
2. Dial the individual CO Line, CO Group Access Code, or the first CO Line Access Code from the accessible group.

To access a CO Line Group, perform the following Steps:

1. Lift the handset.
2. Press 8 for the CO Group.
3. Dial the CO Group number (refer to Ref. A)

To assign the **{LOOP}** button, perform the following Steps:

1. Press the **[TRANS/PGM]** button
2. Press **{FLEX}**
3. Press **[TRANS/PGM]**
4. Dial 8 4
5. Press the **[HOLD/SAVE]** button to accept changes.

**Condition**

- When the Override 1st CO Line Group is enabled, the System will search for the next accessible CO group until a CO Line is available if there is no available CO Line by dialing the CO Line group access code (9 or 0).
- An error tone should be heard when a Station is not permitted to access a CO Line, but the Station will still be able to receive a transferred CO Line call as applicable.
- The CO Line choice (Round-robin or Last Choice) is determined by Admin Programming (ADMIN 160-FLEX 3)
- If the CO Line is BRI, when a user tries to secure B1 the System can change the CO Line to B2 (if there is a **{B2 CO}** button or **{LOOP}** button).
- Unused CO Lines should be assigned to unused CO Group to prevent being accessed by a station.
- The first CO Line group (00) is the directed line group and can be used with the **{CO Line}** button (Private Line).

**Reference**

**A.** Refer to **ipLDK Hardware Description and Installation Manual**, Access CO in 1st CO Group Code (PGM 107 – FLEX 12)

**B.** Refer to **ipLDK Hardware Description and Installation Manual**, Access Individual CO Code (PGM 107 – FLEX 8)

**C.** Refer to **ipLDK Hardware Description and Installation Manual**, Access CO Group Code (PGM 107 – FLEX 7)

**D.** CO Line Choice (PGM 160 – FLEX 3, Round Robin/Last Choice)

**Admin Programming**

- CO Line Choice (PGM 160 – FLEX 3)
- Inter-digit Timer (PGM 181 – FLEX 8)
- CO Line Group Access (PGM 117)
- CO Line Group (PGM 141 – FLEX 1)
- Override 1st CO Line Group (PGM 161 – FLEX 3)

## 2.2.2 Call Time Restriction

**Description**

The Call Time Restriction feature is used to restrict outgoing CO call time. In Station programming, the User can set the Call Cut-Off timer, whereas the call will be disconnected automatically when the timer expires. The called and called parties will hear a warning tone 15 seconds before the call is disconnected.

**Condition**

- This feature can be assigned on a station-by-station basis, and is applied to just outgoing CO calls.
- If the Call Cut Off timer is enabled on a Station, the timer is still applicable when a call is transferred to another Station.
- On the add-on conference, the Call Cut Off timer enabled Station will be restricted to the outgoing CO call time.
- The Call Cut Off timer is not released when the call is placed on hold, or is transferred.

**Admin Programming**

- CO Call Time Restriction (PGM 112 – FLEX3)
- Call Cut-Off Timer (PGM 113 – FLEX12)

## 2.2.3 CO Line Queuing

**Description**
When a Station user receives a busy tone during an attempt to access a CO Line, the user may request a call back (queue call). The station will receive a call back when the busy CO Line becomes available.

**Operation**
To activate CO Line Queuing while receiving a busy tone, perform the following Steps:

1. Press and release the hook-switch if the station is a SLT.
2. Dial 5 5 6 (refer to Ref. A) or press the **[CALL BK]** button.
3. When the confirmation tone is heard, replace the handset.
4. Once the CO Line becomes idle, the call back ring will be received at the station.
5. Lift the handset, the CO dial tone should be heard to make a call.

**Condition**
1. A CO Line may have any number of queues at one time.
2. When the queued CO Line becomes idle or a CO Line becomes available in the group, the oldest queued station will receive the call back.
3. A station can make only one CO Line queuing request at a time. If the station tries to make another CO Line queuing, the previous one is canceled and the newer one is activated.
4. If the waiting station is busy and the queued CO Line is available, the available CO Line will be directed to the next queued idle station.
5. If the waiting station is idle, the queued CO Line will give a call back signal to the station for 15 seconds. If the signal is not received at the station, the queue is canceled and the next station in the queue will receive the signal.

**Reference**
**A.** Message Wait Enable: 2.4.16

**Admin Programming**
■CO Line Queuing (PGM 112 – FLEX 5)

## 2.2.4 CO Step Call – Analog Only

**Description**
When a station receives a busy tone after accessing a CO Line, the user can dial a CO Line number which has the same first digits as the called busy CO Line without dialing the full number.

**Operation**
To use CO Step Call when receiving a busy tone, perform the following Steps:

1. Press the **[SPEED]** button and dial the last digit of the previously called number.
2. The previous call is terminated and a new call is established.

**Condition**
CO Flash Timer(Depending on the Public Exchange): it may be necessary to increase this timer in order to use the CO Step Call Feature.

**Admin Programming**
CO Flash Timer (PGM 142)

## 2.2.5 Emergency Call Service

**Description**
The user can dial the Emergency Service Code regardless of lower station COS.

**Condition**
- An emergency call can be dialed by pressing an available CO Line at the station that is assigned to COS 7.
- If the dialed number for emergency code is the same as station number or LCR number, the call is operated according to preference. The preference of programmed dial number which is sent to external CO line is, LCR table -> Station Number -> Emergency Call code.
- When emergency code is the same as station number or LCR number, if COS 7 Station only dials this number, station call is operated.

**Admin Programming**
- Emergency Service Call (PGM 226)

## 2.2.6 Hot Line & Warm Line

**Description**
A station user can instantly make an outgoing call by lifting the handset or pressing the [ICM], if the user has previously stored the destination.

The destination can be a CO Line or CO Line Group; the function can be setup on a Flexible Button, or at another Station.

Hot Line can be activated immediately when the Station is in the off-hook state; Warm Line can be activated after the Warm Line Timer has expired. If the user dials other number prior to the Warm Line Timer expiration, the call will activate as a normal call, not as a Warm Line call.

**Operation**
To activate a Hot Line, perform the following Steps:

1. Lift the handset at a station where Hot Line is assigned.
2. The assigned Hot Line feature is immediately activated.

To activate Warm Line, perform the following Steps:

1. Lift the handset at a station where Warm Line is assigned.
2. The assigned Warm Line feature is activated if no dialing has been done while the Warm Line Timer is running.

**Condition**
- A station can be assigned Hot Line or Warm Line with Admin Programming (ADMIN 113-FLEX 7).
- If there is no Flexible Button at the station, the number is operated as a Speed Dial Number.
- The set value of the Warm Line Timer should be less than that of the Dial Tone Timer.
- A Flexible Button may be assigned as an Idle Line Selection button.
- When lifting the handset or pressing the **[MON]** button, the system will be activated as a predefined button is pressed.
- It is possible to activate Hot Line/Warm Line at an SLT station.

**Admin Programming**
- Warm Line Timer (PGM 182 – FLEX 8)
- Warm Line (PGM 113 – FLEX 7)
- Idle Line Selection (PGM 122)

## 2.2.7 Least Call Routing (LCR)

### Description

LCR is a system programmable feature that automatically selects the least expensive available route when an outgoing CO call is made. This programming eliminates the necessity for the user to dial the access code of the least expensive carrier. There are three ways to activate LCR:

- **Internal LCR** - If dialed digits are matched with an internal LCR code, the system will secure a CO Line from the programmed CO Group and send the modified digits according to LCR programming.
- **Loop LCR** - When dialing the first accessible CO Group Code (9 or 0), or pressing the **[Loop]** button, if the dialed digits match with a COL LCR code, the system will secure a CO Line from the programmed CO Group and send the modified digits according to LCR programming.
- **Direct CO LCR** - After dialing a CO Line or CO group code (9 or 0, depending on the nation you are calling from), or pressing a CO Line or CO group button, LCR can be activated. If the dialed digits are matched with a COL LCR code, the system will secure a CO Line from the programmed CO group and send the modified digits according to LCR programming.

When a user selects a CO Line and dials a destination number, the system checks the LCR programming and sends the call according to the least cost route according to the ADMIN program (Figure 2.2.7).

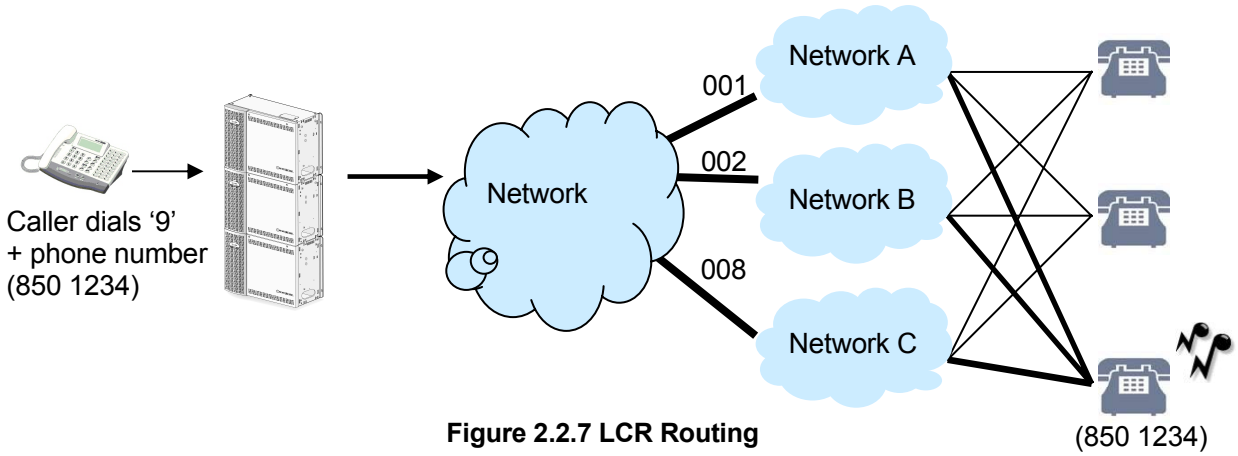



**Figure 2.2.7 LCR Routing**

Assuming the LCR code is 9, the Network A (001) is least cost during the daytime, and Network B (002) is least cost during the night. The Caller dials the same number and the System automatically routes it through the least cost network.

### Operation

To activate Internal LCR, perform the following:

1. Dial the internal LCR Code after lifting the handset, or pressing the **[MON]** button (on-hook dialing can also activate LCR).
2. It is an internal LCR Code if the code is programmed with internal or both in the Leading Digit Table.

To activate Loop LCR, perform the following:

1. Dial COL LCR code after dialing the first accessible CO Line or CO Group access code (0 or 9), or press the **[Loop]** button.
2. It is a COL LCR code if the code is programmed with COL or BOTH in the Leading Digit Table.

To activate Direct CO LCR, perform the following:

1. Dial the COL LCR code after dialing a CO or CO Group Access code, or press a CO or CO Group button.
2. It is a COL LCR code if the code is programmed with COL or BOTH in the Leading Digit Table.

***Ex. 1*** *Add Prefix Digit—The long distance call access code starts with 0 (i.e., 02, 031, 051); if a cheaper carrier exists, the user can access it with the carrier access code 082 and the long distance access code without 0.*

*ipLDK system administrator wants to use this cheaper carrier for all long distance calls (i.e., dial 0314502628, 082314504628).*

| ADMIN 220 | ADMIN 221 (LDT) | ADMIN 222 (DMT) |
|---|---|---|
| LCR MODE<br>M01, M02, M11, M12<br>(LOOP LCR enabled) | Bin 000<br>LCR TYPE: COL<br>LCR CODE: 0<br>DMT: 00 00 00 | Bin 00<br>Remove Position: 01<br>Remove Number: 01<br>Add Position: 01<br>Add Digit: 082 |

***Ex. 2*** *Select CO Group—ipLDK system is connected with two carriers (one carrier is carrier A, the other carrier is carrier B). Carrier B is used for international calls, and Carrier A is used for all other calls. The international call access code is 001.*

*ipLDK system administrator wants to program Carrier B to be used for only international calls.*

| ADMIN 141 | ADMIN 117 | ADMIN 161-3 |
|---|---|---|
| Set CO Lines from the carrier 'A' to CO group 1<br>Set CO Lines from the carrier 'B' to CO group 2 | Enable access CO group<br>01, 02 | Override 1st CO Group :<br>OFF |

| ADMIN 220 | ADMIN 221 (LDT) | ADMIN 222 (DMT) |
|---|---|---|
| LCR MODE<br>M01, M02, M11, M12<br>(LOOP LCR enabled) | Bin 000<br>LCR TYPE: COL<br>LCR CODE: 001<br>DMT: 00 00 00 | Bin 00<br>Co Group: 02 |

***Ex. 3*** *Make another CO Access Code—ipLDK system has VOIP CO Lines and normal CO Lines; system administrator wants to access VOIP CO using code 7, and access normal CO Lines using code 9 (as the default CO Access Code).*

| ADMIN 106 |
|---|
| Remove / change numbering plan which starts with '7' |

| ADMIN 141 | ADMIN 117 | ADMIN 161-3 |
|---|---|---|
| Set normal CO Lines to CO group 1<br>Set VOIP CO Lines to CO group 2 | Enable access CO group 01, 02 | Override 1st CO Group : OFF |

| ADMIN 220 | ADMIN 221 (LDT) | ADMIN 222 (DMT) |
|---|---|---|
| LCR MODE<br>M02, M12, M13<br>(Internal LCR enabled) | Bin 000<br>LCR TYPE : INT<br>LCR CODE : 7<br>DMT : 00 00 00 | Bin 00<br>Remove Position : 01<br>Remove Number : 01<br>Co Group : 02 |

***Ex. 4*** *Password for specific dial number—The international access code is 001; system administrator allows international calls by only those users who know the system password.*

| ADMIN 220 | ADMIN 221 (LDT) | ADMIN 222 (DMT) |
|---|---|---|
| LCR MODE<br>M12, M13<br>(LOOP/CO LCR enabled) | Bin 000<br>LCR TYPE: COL<br>LCR CODE: 001<br>DMT: 00 00 00<br>Check Password: ON | Bin 00<br>Co Group: 01 |

**Condition**

- There are 6 LCR modes. The mode is determined by ADMIN 220 – FLEX 1.
  - LCR Access Mode 00 (M00): LCR call is disabled.
- The leading digits can be duplicated. FLEX 2 and the DMT index make each entry unique.
- The Leading Digit table is sorted by leading digits, FLEX 2 in LDT (INT, COL, BOTH) and DMT index.
- Internal LCR is applied if the dialed digits are matched with one of leading digits and FLEX 2 is *INT* or *BOTH*.
- Loop LCR is applied if the dialed digits are matched with one of leading digits and FLEX 2 is *COL* or *BOTH*.
- Direct CO LCR is applied if the dialed digits are matched with one of the leading digits and FLEX 2 is *COL* or *BOTH,* and the secured CO Line belongs to the programmed CO Group in DMT.
- To work Loop LCR and Direct CO LCR differently with the same leading digits, there should be a leading digit entry for loop LCR prior to the leading digits for direct CO LCR. It is possible if the DMT index for loop LCR is smaller than the DMT index for direct CO LCR.
- While direct CO LCR is applied to ISDN CO, an ISDN Information message with called party IE, which includes only the numbering plan and numbering type, is sent to the network when a user dials a digit. It is for the network not to disconnect the line.
- For direct CO LCR, leading digits should be programmed in consideration with the dial tone time provided by the Network.
- Direct CO LCR does not use an alternative DMT index if a CO Line is already accessed.
- LCR always has the higher precedence than the flexible numbering plan table.
- LCR can be applied in the following instances:
  - Dialing after accessing a CO Line by dialing a CO Line access code (0 or 0) only.
  - Dialing after accessing a CO Line by pressing the **{LOOP}** button.
  - Dialing without accessing a CO Line.
  - Speed Dial.
  - Off-net Call Forward
  - Redial (if the previous call is LCR applied).
  - ACNR (If the call is LCR applied when activating ACNR)
- Any leading digit string at the LDT table can be a sub-string of another leading digit string such as 012 and 0123.
- Capacity for LCR Table:
  - 3 Day Zones
  - 3 Time Zones
- Number of 'Dialed Code Bins': 250 bins
- Number of 'Modification Code Bins': 100 bins
- Maximum number of 'Dialed digits': 12 digits
- Maximum number of 'Added digits': 25 digits
- Alternative DMT index: 1EA

**Admin Programming**

- LCR Attributes (PGM 220)
- Leading Digit Table (PGM 221)
- Digit Modification Table (PGM 222)
- LCR Table Initialization (PGM 223)

## 2.2.8 Memory Dialing

### *2.2.8.1 Auto Call Number Redial (ANCR)*

**Description**
If Call destination is busy or no answer, redialing is operated repeatedly within the ACNR retry counter. The system will retry the number based on programming with appropriate pauses in between dialing (default = 3 times).

**Operation**
To use ACNR while receiving a busy/no answer indication on a CO Line, perform the following Steps:

1. Press the **[REDIAL]** button.
2. Replace the handset or go on-hook.
3. The system will automatically retry the call at programmed intervals.
4. When the called party answers, lift handset,
   OR
5. Press the **[MUTE]** button to make the call.

To cancel ACNR, perform the following Steps:

1. Press the flashing **[REDIAL]** button,
   OR
2. Lift the handset,
   OR
3. Press the **[MUTE]** button while a CO Line is accessed to cancel ACNR.

**Condition**
1. A DKTU that doesn't have a **[REDIAL]** button, should be programmed with a **[REDIAL]** Flexible Button to use ACNR:
2. **[TRANS/PGM]** + FLEX + **[TRANS/PGM]** + 9 7 + **[HOLD/SAVE]** (2 or 8 Button only)
3. The analog CO Lines in the system should be equipped with Call Progress Tone detection Units (CPTU).
4. When a predefined CO Line is busy in ACNR mode, an available CO Line in the same group will be secured.

**Admin Programming**
- ACNR Pause Timer (PGM 180 – FLEX 10)
- ACNR Delay Timer (PGM 180 – FLEX 8)
- ACNR Tone Detect Timer (PGM 180 – FLEX 13) – applicable to analog CO Line only
- ACNR No Answer Timer (PGM 180 – FLEX 9)
- ACNR Retry Counter (PGM 180 – FLEX 11)
- ACNR Tone Cadence (PGM 423)

### *2.2.8.2 Last Number Redialing*

**Description**
The last dialed number on a CO Line can be stored (up to 32digits) in the station's Last Number Redial buffer. The user may select to redial the last number dialed on the system. Each DKTU with an LCD panel in the system has 10 individual last dialed number directory locations.

**Operation**
To use Last Number Redial at a DKTU, perform the following Steps:

1. Lift the handset or press the **[MON]** button.
2. Press the **[REDIAL]** button,
   OR
3. Press the **[SPEED]** button and dial *.
4. Press the **[HOLD/SAVE]** button to accept.

To use one of the recently dialed numbers in the Last Number Directory by scrolling at a DKTU with an LCD panel, perform the following Steps:

1. When the last dialed number is displayed, press the **[UP]** or **[DOWN]** button to find the desired phone number (up to 10 last dialed numbers can be stored in the directory).
2. To make a call, press the **[HOLD/SAVE]** button when the phone number is displayed.

To use Last Number Redial at an SLT, perform the following Steps:

1. Lift the handset.
2. Dial 5 5 2 (refer to Ref. A),
   OR
3. Press the **[REDIAL]** button.

**Condition**
- When the used CO Line is busy, an idle CO Line in the group is accessed and the last dialed number is dialed.
- The last dialed number directory allows duplicated phone numbers.
- If you use Last Number Redial while the Auto-redial is activated, the auto-redial is canceled.

**Reference**
**A.** Refer to **ipLDK Hardware Description and Installation Manual**, SLT Last Speed Dial Code (PGM 106 – FLEX 12)

### *2.2.8.3 Save Number Redialing*

**Description**
Any dialed number can be saved temporarily and used at any time. This number is saved until a new number is stored.

**Operation**
To save a number in the Save Number Redial buffer from a DKTU, perform the following Steps:

1. Press the **[SPEED]** button twice, while on a conversation with an external party.
2. Replace the handset or go on-hook.

To dial a number from the Save Number Redial buffer from a DKTU, perform the following Steps:

1. Lift the handset or press the **[MON]** button.
2. Press the **[SPEED]** button.
3. Press the # button.

**Condition**

1. When the used CO Line is busy, an idle CO Line in the group is accessed and the saved number is dialed.
2. The stored save number is not deleted when the system power is OFF.
3. If you press **[SPEED]** button twice after accessing a CO Line and dialing, then pause, the save number redial bin will be erased.

### *2.2.8.4 Station Speed Dialing*

**Description**

A DKTU user can store up to 100 frequently used station numbers to Station Speed Bin (000 – 099). Station numbers consisting of up to 24 digits including pauses, Flash commands, pulse-to-tone switchover, and no-display characters (pause is automatically inserted after a flash).

| MODEL | Speed dial of system |
|---|---|
| ipLDK-20 | 500 |
| ipLDK-100 | 1500 |
| ipLDK-300 | 3000 |
| ipLDK-300E | 5000 |

**Operation**

To make a call using Station Speed Dial from a DKTU, perform the following Steps:

1. Lift the handset or press the **[MON]** button.
2. Press the **[SPEED]** button.
3. Dial the Station Speed Dial bin (000 – 099).

To store Station Speed Dial numbers from a DKTU, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Press the **[SPEED]** button.
3. Dial the Station Speed Dial bin (000 – 099).
4. If desired, press the CO Line or Group button.
5. Dial the desired telephone number, including these special codes:
   - **[CALLBK]** – Insert Pause
   - ***** key – If stored as the first digit, its function is Display Security. Otherwise, its function is Pulse to DTMF Switchover.
   - **[DND/FOR]** – If CO Dial Tone Detect (refer to Ref. A) is ON and it is stored as the first or second digit, and the accessed CO Line is behind the PBX mode, its function is Dial Tone Detect. Otherwise, its function is Pause.
   - **[FLASH]** – Inserts a Flash into the speed number.
   - If the accessed CO Line is analog, its function is Flash to PX (or PBX).
   - If the accessed CO Line is ISDN line (refer to Ref. B) and it is stored as the first digit, it makes the remaining digits sent with envelope information not in the Calling Party Number IE but in keypad facility IE.
6. Press the **[HOLD/SAVE]** button.
7. If desired, enter the name (max. 16 characters) using the 2-digit code for each character.
8. Press the [HOLD/SAVE] button.
9. To store continuously, repeat this procedure from Step 3.

To delete a Station Speed Dial bin, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Press the **[SPEED]** button.
3. Dial the Speed Dial bin number to be erased.
4. Press the **[HOLD/SAVE]** button.
5. The stored Speed Dial number should be erased from the speed bin.

To display and enter a Speed Dial bin by scrolling, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Press the **[SPEED]** button.
3. Dial the Speed Dial bin number.
4. Press the **[UP]** or **[DOWN]** key to display the next/previous Speed Dial number.

To store Station Speed Dial numbers from a SLT, perform the following Steps:

1. Lift the handset.
2. Dial the Speed Dial program code 5 5 5 (refer to Ref. C).
3. Dial the Speed Dial bin number (000 – 099).
4. Dial the desired phone number (up to 24 digits).
5. Press and release the hook-switch.

To make a call using Station Speed Dial from a SLT:

1. Lift the handset.
2. Dial the Speed Dial access code 5 5 8 (refer to Ref. D).
3. Dial the Station Speed dial bin (000 – 099).

To delete a Station Speed Dial from a SLT:

1. Lift the handset.
2. Dial the Speed Dial access code 5 5 5 (refer to Ref. C)
3. Dial the appropriate Station Speed Dial bin (000 - 099).
4. Press and release the hook-switch.

**Condition**

1. CPTU should be installed to detect a dial tone.
2. The Station Speed Dial is secured in data protect mode when the power is OFF.
3. There can be a maximum of 24 digits in a Station Speed Dial number including special digits and Function codes.
4. If you dial an empty station Speed dial bin, an error tone will be heard.
5. If you select a CO Line before dialing a Speed Dial bin number, the selected CO Line is used even though there is a programmed CO Line in the Speed Dial bin number.
6. If the speed dial is programmed to access a specific CO line and the line access by the speed dial is busy, the system seizes another Co line registered in the same CO line group.

**Reference**

**A.** CO Dial Tone Detect (ADMIN 160 – FLEX 6)

**B.** ISDN Line: 2.14

**C.** Refer to **ipLDK Hardware Description and Installation Manual**, Speed Dial Program Code (ADMIN 106 – FLEX 12)

**D.** Refer to **ipLDK Hardware Description and Installation Manual**, Speed Dial Access Code (ADMIN 106 – FLEX 15)

**Admin Programming**

- Speed Dial Access (PGM 112 - FLEX 9)
- CO Dial Tone Detect (PGM 160 – FLEX 6)

*2.2.8.5 System Speed Dialing*

**Description**

The System Speed Dial bins are programmed by the System Attendant (Figure 2.2.8.5). These numbers are available for easy access by all stations allowed in the system.

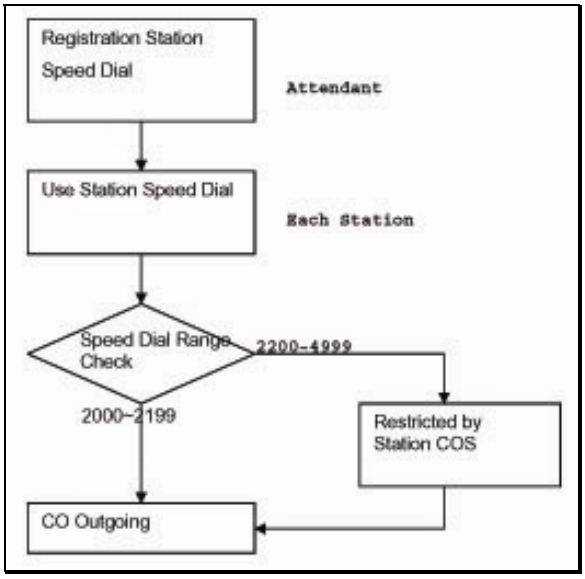



**Figure 2.2.8.5 System Speed Dial**

**System Speed Dial**

| Speed Dial Range | Description |
|---|---|
| 2000 – 2199 | Unrestricted |
| 2200 – 2499 (ipLDK-20) | Restricted by Station COS |
| 2200 – 3499 (ipLDK-100) | |
| 2200 – 4999 (ipLDK-300) | |
| 2200 – 6999 (ipLDK-300E) | |

**System COS**

| | |
|---|---|
| COS 1 | There is no restriction to dial. |
| COS 2 | Monitored by Exception Table A |
| COS 3 | Monitored by Exception Table B |
| COS 4 | Monitored by Exception Table A & B |
| COS 5 | Long distance call is not allowed; the dialed digits can be longer than 7 digits.) |
| COS 6 | Long distance call is not allowed; only max. 7 digits may be dialed. |
| COS 7 | Only intercom, paging and emergency call are allowed; no dialing allowed on CO Lines. |
| COS 8 | Monitored by Exception Table C |
| COS 9 | Monitored by Exception Table D |
| COS 10 | Monitored by Exception Table C & D |
| COS 11 | Monitored by Exception Table A, B, C & B |

**Operation**

To store a number in a System Speed Dial from the System Attendant:

1. Press the **[TRANS/PGM]** button.
2. Press the **[SPEED]** button.
3. Dial the System Speed Dial bin.
4. If desired, press the CO Line or Group button.
5. Dial the desired phone number and include these special codes (up to 24 digits).

- **[CALLBK]** – Insert Pause
- ***** key – If stored as the first digit, its function is Display Security. Otherwise, its function is Pulse to DTMF Switchover.
- **[DND/FOR]** – If CO Dial Tone Detect (refer to Ref. A) is ON and it is stored as the first or second digit, and the accessed CO Line is behind the PBX mode, its function is Dial Tone Detect. Otherwise, its function is Pause.
- **[FLASH]** – Inserts a Flash into the speed number.
- If the accessed CO Line is analog, its function is Flash to PX (or PBX).
- If the accessed CO Line is ISDN line (refer to Ref. B) and it is stored as the first digit, it makes the remaining digits sent with envelope information not in the Calling Party Number IE but in keypad facility IE.

6. Press the **[HOLD/SAVE]** button.
7. If desired, enter the name (up to 16 characters) by dialing 2-digits for each character.
8. Press the **[HOLD/SAVE]** button.
9. To store continuously, repeat this procedure from Step 3.

To make a call using System Speed Dial from a DKTU:

1. Lift the Handset or press the **[MON]** button.
2. Press the **[SPEED]** button.
3. Dial the System Speed Dial bin.

To make a call using System Speed Dial from a SLT:

1. Lift the handset.
2. Dial the Speed Dial access code 5 5 8 (refer to Ref. C).
3. Dial the System Speed Dial bin.

**Condition**

1. The CPTU should be installed for dial tone detect.
2. System Speed Dial is restricted by Station COS.
3. There can be a maximum of 24 digits in a System Speed Dial number including other applicable digits and special function codes.
4. If you dial an empty system speed bin, an error tone will be heard.
5. If you select a CO Line before dialing a System Speed Dial bin number, the selected CO Line is used regardless of if there is a programmed CO Line in the System Speed Dial bin number.
6. If the speed dial is programmed to access a specific CO line and the line access by the speed dial is busy, the system seizes another Co line registered in the same CO line group.
7. If all CO Lines in the group are busy, a busy tone indication should be heard when attempting to access a System Speed Dial number.
8. System Speed Dial numbers are protected when the system is powered OFF.

**Reference**

**A.** CO Dial Tone Detect (ADMIN 160 – FLEX 6)

**B.** ISDN: 2.14

**C.** Refer to **ipLDK Hardware Description and Installation Manual**, Speed Dial Access Code (ADMIN 106 – FLEX 15)

**Admin Programming**

- Speed Dial Access (PGM 112 – FLEX 9)
- System Speed Zone (PGM 232)
- CO Dial Tone Detect (PGM 160 - FLEX 6)

## 2.2.9 Private Line

**Description**
CO Lines in the system can be assigned for exclusive use by one or more DKTU users. Private lines are assigned to CO Line Group 00 and an appearance (Flexible CO button) is required at the DKTU. (Loop or Pool keys cannot be used.)

**Operation**
A private line will operate as a normal CO Line except access is limited to assigned stations.

**Condition**
1. Private line cannot be picked up.

**Admin Programming**
- CO Line Group (PGM 141 – FLEX 1)

## 2.2.10 Dialing Service by Prefix code (for Ukraine)

**Description**
When a user dials the number, a system checks the prefix code and then, if it matched with the prefix code, the call is made by the table correspond to prefix code.

**Operation**
1. A user dials the co access code and he hears the dial tone from the system.
2. If a user dials, a System analyzes the dialed digit according to Prefixed Table related to CO line.
3. If it matched the prefix code and sending complete option is OFF, the Setup message is made by the table corresponds to prefix code.
4. If it matched the prefix code and sending complete option is ON, the Setup message is made by the table corresponds to prefix code after a user dials max digits.
5. If a Max digit is not same as Max digit, “Enblock inter digit timer” is applied within Max digit.
6. If it does not match the prefix code, the call follows the normal outgoing flow.

**Condition**
1. This is applied about only ISDN line.
2. Prefix code includes number ‘0~9’ and any digit ‘D’.(with DND button). D used as any digit in Masked Prefix Table.
3. When a user seizes the CO line to dial, it is changed to BUSY state.

**Admin Programming**
- Prefix Table Index **(PGM143 - FLEX16)**
- Enblock Prefix Table **(PGM 205)**

# 2.3 Rerouting

## 2.3.1 Call Forward

**Description**
A Station User can forward calls to any Station, Station Group, or VMIB in the system by activating feature codes. There are several types of Call Forwarding: Unconditional, Busy, No answer, Busy/No Answer, Unconditional Station Off-Net Call Forward, No Answer Station Off-Net Call Forward, Unconditional Station Off-Net Call Forward with Tel Number, No Answer Station Off-Net Call Forward with Tel Number, Incoming CO Off-Net Call Forward, and Follow Me Call Forward.

**Operation**
To activate Call Forward, follow Operation directions in each sub-heading for this section.

To program Call Forward to a Flexible Button, perform the following:

1. Press the **[TRANS/PGM]** button.
2. Press the flexible button to be assigned.
3. Press the **[DND/FWD]** button.
4. Assign the Call Forward type:
   - 1 = Call Forward, Unconditional
   - 2 = Call Forward, Busy
   - 3 = Call Forward, No Answer
   - 4 = Call Forward, Busy/No Answer
   - 5 = Unconditional Station Off-Net Call Forward
   - 6 = No Answer Station Off-Net Call Forward
   - 7 = Incoming CO Off-Net Call Forward
   - # = Deactivation Forward
5. Dial the destination that will receive the call.
6. Press the **[HOLD/SAVE]** button.

To deactivate Call Forward, perform the following Steps:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Press the # key (Call Forward cancel code).

**Condition**
1. To use Call Forward, a Station should be activated in Admin Programming.

**Admin Programming**
- Allow Off-Net Call Forward (PGM 111 – FLEX18)
- Authorization Code Table (PGM 227)

### *2.3.1.1 Call Forward, Unconditional*

**Description**
A user forwards all calls immediately to another station, Hunt Group or VMIB.

**Operation**
To activate Unconditional Call Forward:

1. Lift the Handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial the Call Forward code 1.
4. Dial Station or Group pilot number to receive the calls.
5. Replace the handset and go on-hook.

To assign **{CALL FORWARD}** button at a flexible button:

1. Press the **[TRANS/PGM]** button.
2. Press a flexible button.
3. Press the **[DND/FOR]** button.
4. Assign Call Forward type 1.
5. Dial the destination that will receive the call.
6. Press the **[HOLD/SAVE]** button to accept changes.

To deactivate Call Forward:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward cancel code **#**.

### *2.3.1.2 Call Forward, Busy*

**Description**
When the User Station line is busy, calls can be forwarded to an alternate location.

**Operation**
To activate call forward for when the line is busy, perform the following Steps:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial the Call Forward type code 2.
4. Dial Station, Group, or VMIB number that will receive the call.

To assign the **{CALL FORWARD}** button at a flexible button:

1. Press the **[TRANS/PGM]** button.
2. Press a flexible button.
3. Press the **[DND/FOR]** button.
4. Assign the Call Forward type 2.
5. Dial the destination that will receive the call.
6. Press the **[HOLD/SAVE]** button.

To activate Call Forward:

1. Press the assigned flexible button.
2. The LED of **[DND/FOR]** button is flashing and the function assigned to the flexible button is activated.

To activate Call Forward to VMIB:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial the Call Forward code (1-4).
4. Dial VMIB selection code number that will receive the call.
5. Replace the handset and go on-hook.

To deactivate Unconditional Call Forward:

1. Press **[DND/FOR]** button.
2. Go off-hook.
3. Press **[DND/FOR]** button and dial #.

To deactivate Call Forward:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial the Call Forward cancel code #.

### *2.3.1.3 Call Forward, No Answer*

**Description**
When the station user does not answer within a predetermined amount time, the call can be forwarded to an alternate location.

**Operation**
To activate call forward for when there is no answer, perform the following:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial a Call Forward type code 3.
4. Dial Station, Group or VMIB number to receive the call.

To assign **{CALL FORWARD}** button at a flexible button:

1. Press the [**TRANS/PGM]** button.
2. Press a flexible button.
3. Press the **[DND/FOR]** button.
4. Assign the Call Forward type 3.
5. Dial the destination that will receive the call.
6. Press the **[HOLD/SAVE]** button.

To activate Call Forward:

1. Press the assigned flexible button.
2. The LED of **[DND/FOR]** button is flashing and the function assigned to the flexible button is activated.

To deactivate Call Forward:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward cancel code #.

**Admin Programming**

- Call Forward No Answer Timer (PGM 181 – FLEX 1)

### *2.3.1.4 Call Forward, Busy/No Answer*

**Description**
A User can direct the System to re-route calls to another station, group or VMIB when the Station is busy and/or does not answer in a predefined 'No Answer' time. Incoming CO Lines, transferred CO Lines, and ringing Intercom calls are forwarded.

**Operation**
To activate call forward, when the line is busy or not answer, perform the following:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial the Call Forward type code 4.
4. Dial Station, Group or VMIB number that will receive the call.

To assign **{CALL FORWARD}** button at a flexible button:

1. Press the **[TRANS/PGM]** button.
2. Press a flexible button.
3. Press the **[DND/FOR]** button.
4. Assign the Call Forward type 4.
5. Dial the destination that will receive the call.
6. Press the **[HOLD/SAVE]** button.

To activate Call Forward:

1. Press the assigned flexible button.
2. The LED of the **[DND/FOR]** button should be flashing and the function assigned to the flexible button will be activated.

To deactivate Call Forward:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward Cancel Code **#**.

### *2.3.1.5 Call Forward, Station Off-net (Unconditional, No answer)*

**Description**
Stations allowed call forward access can forward intercom and transferred CO Line calls to a directory number (telephone number) outside of the system. When a call is received, the system will access an outgoing CO Line and dial the telephone number entered by the user.

If a station assigned off-net call forward receives a call from an internal and/or external caller, the call will be forwarded to off-net unconditionally (Code 5) or after No Answer Ring timer is expired (Code 6).

Note that if both incoming CO and outgoing CO are analog line, the system will automatically disconnect the call after the Unsupervised Conference Timer has expired.

**Operation**
To activate unconditional Off-Net Call Forward:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial the Call Forward code 5.
4. Seize a CO Line, if required.
5. Dial the Speed Dial bin number with the desired phone number.
6. Replace the handset and go on-hook.

To activate no answer off-net call forward:

1. Lift handset or press **[MON]** button.
2. Press **[DND/FOR]** button.
3. Dial Call Forward Code 6.
4. Seize a CO Line, if required.
5. Dial a speed bin number with the desired phone number.
6. Replace the handset and go on-hook.

To deactivate Call Forward:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward cancel code **#**.

### *2.3.1.6 Call Forward, Station Off-net with Tel Num (Unconditional, No answer)*

**Description**

Stations allowed call forward access can forward intercom and transferred CO Line calls to a directory number (telephone number) outside of the system. When a call is received, the system will access an outgoing CO Line and dial the telephone number entered by the user.

If a station assigned off-net call forward received a call from internal caller and external caller, the call is forwarded to off-net unconditionally (Code 8) or after No Answer Ring timer is expired (Code 9).

Note that if both incoming CO and outgoing CO are analog line, the system will automatically disconnect the call after the Unsupervised Conference Timer has expired.

**Operation**

To activate unconditional Off-Net Call Forward:

1. Lift handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward Code 8.
4. Seize a CO Line, if required.
5. Dial the desired phone number instead of speed bin.
6. Replace the handset and go on-hook.

To activate no answer off-net call forward:

1. Lift handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward Code 9.
4. Seize a CO Line, if required.
5. Dial the desired phone number instead of speed bin.
6. Replace the handset and go on-hook.

To deactivate Call Forward:

1. Lift the handset or press the [**MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward Cancel Code **#**.

**Condition**

1. The entered telephone number will be automatically assigned to a station speed bin, but the telephone number cannot be erased or edited from the normal speed bin programming mode.
2. The assigned station speed bin will be deleted automatically when the user cancel this function.

*2.3.1.7 Call Forward, Incoming CO Off-net (ATD only)*

**Description**

The System Attendant can direct the System to re-route (forward) incoming CO Line calls to a directory (telephone) number outside the system. When a call is received, the system will access an outgoing CO Line and dial the telephone number assigned by the attendant. Note that if both incoming CO and outgoing CO are analog line, the system will automatically disconnect the call after the Unsupervised Conference Timer has expired.

| Field | ipLDK-20 | ipLDK-100 | ipLDK-300/300E |
|---|---|---|---|
| CO Group Access | 801~808 | 801~824 | 801~872 |
| Individual CO Access | 88XX | 88XX | 88XXX |
| Retrieve Held CO Line | 8* | 8* | 8* |

**Operation**

To activate incoming CO Line off-Net at the Attendant:

1. Lift the handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward code 7.
4. Dial CO Line/group access code (9, 801-8xx, 8801-88xx, or 8* for all CO Lines) or press **{CO Line}** button.
5. Dial the Speed Dial bin number with the desired telephone number.
6. Replace the Handset and go on-hook.

To deactivate CO Line Off-Net Call Forward from the attendant:

1. Lift the Handset or press the [MON] button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward code 7.
4. Dial CO Line/group access code (9, 801-8xx, 8801-88xx, or 8*) or press **{CO Line}** button.
5. Dial Call Forward Cancel Code #..

**Condition**

1. If there is no idle CO Line, Off-net Call Forward is not activated.
2. This feature is not applicable for DID lines.
3. It is unconditional and forwarded immediately when the CO Line rings in the system.
4. If a speed bin is programmed in a Flexible button, you may press the Flexible button instead of dialing the speed bin number.
5. Toll restriction will be based on the COS of outgoing CO Line.

### *2.3.1.8 Call Forward, Follow Me*

**Description**
Follow-Me Call Forward can be activated at the Station or from any Station in the system with Call Forward access. It must be programmed from the Station that you will be forwarded to and a user password must be entered at the User Station first(Forwarding Station).

**Operation**
To activate Follow-me Call Forward from any Station:

1. Lift the Handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward Code 0.
4. Dial forwarding Station number from which calls will be forwarded.
5. Dial forwarding Station authorization code.
6. Replace the Handset and go on-hook.

To deactivate Follow-me Call Forward from the Station (User Station Only):

1. Verify the line is in an idle state.
2. Press the **[DND/FOR]** button.
3. In off-hook state,
4. Press the **[DND/FOR]** button and dial **#**.

To register the authorization code in a station:

1. Press **[TRANS/PGM]** button.
2. Dial 31.
3. Enter the desired Authorization Code (5 digits).
4. Press **[HOLD/SAVE]** button to save.

**Condition**
1. Authorization code should be registered to use Follow-me Call Forward.

**Admin Programming**
- Allow Off-net FWD (PGM 111 – FLEX 18)
- Authorization Code Table (PGM 227)
- Call Forward (PGM 111 – FLEX 2)
- Call Forward No Answer Timer (PGM 181 – FLEX 1)
- Off-net Call Mode (PGM 112 – FLEX 12)
- Unsupervised Conference Timer (PGM 182 – FLEX 6)

### *2.3.1.9 SLT Call Forward*

**Description**
A SLT User can forward calls to other stations, CO Lines or System VMIB.

**Operation**
To activate call forward from a SLT:

1. Lift the handset.

2. Dial call forward code 5 5 4 (refer to Ref. A).
3. Dial the call forward type.
4. Dial the Station or Group speed number that will receive call,
   OR
5. Press the # key to forward to System VMIB.
6. Replace the handset and go on-hook.

To deactivate call forward from a SLT:

1. Lift the handset.
2. Dial the call forward code 5 5 4 and number,
   OR
3. Dial 5 5 9 (refer to Ref. B).
4. Confirmation tone should be heard, then replace the handset.

**Condition**

1. Call forward is maintained until it is deactivated.
2. A call cannot be forwarded to a station in DND mode; when trying to forward to the station, an error tone will be heard.
3. A call forwarding station cannot leave a VMIB message.
4. The call forward feature may be canceled by code 5 5 9; the unified cancel code for DND/Call Forward/Message for SLT.
5. Dial pulse SLT cannot be forwarded to VMIB.

**Reference**

**A.** Refer to ipLDK Hardware Description and Installation Manual, Call Forward Code (ADMIN 106 – FLEX 11)

**B.** Refer to ipLDK Hardware Description and Installation Manual, DND/FWD Cancel Code (ADMIN 106 – FLEX 16)

**Admin Programming**

- Call Forward (PGM 111 – FLEX 2)
- VMIB Access (PGM 113 – FLEX 2)

### *2.3.1.10 Preset Call Forward*

**Description**

When a station receives incoming CO Calls and the Station is programmed to Preset Call Forward, the call is routed to the Preset Call Forward destination if the station does not answer within the Preset Call Forward Timer.

The destination can be another Station or Hunt Group.

**Condition**

1. In Preset Call Forward, a busy station will not receive a CO Line ring and the next assigned station will receive the CO Line ring. If the station is not forwarded to other destination, then the call will not be forwarded and will continue to ring at the station until answered.
2. The Preset Call Forward loop feature is not available (A→B→ C→ A).
3. When a CO Line is forwarded with Preset Call Forward, the original station will stop ringing (the LED of **{CO}** button will flash continuously).

**Admin Programming**

- Preset Call Forward (PGM 121)
- Preset Call Forward Timer (PGM 181 – FLEX 12)

## 2.3.2 Call Transfer

**Description**
An Intercom Call or CO Call can be transferred to another station or CO Line during a conversation.
There are 2 kinds of call transfer: Screened and Unscreened Transfer, as described in the following table.

| Feature | Transferring method |
|---|---|
| Screened Transfer (With Announcement) | Transfer is completed after announcing the destination party. |
| Unscreened Transfer (Without Announcement) | Transfer is completed without an announcement. After dialing the destination, and hearing the ring back tone, the originator can replace the handset. |

### *2.3.2.1 Call Transfer to CO Line*

**Description**
A Station User may transfer a connected call to a new CO call. If an external ISDN party does not answer the transferred call within the designated Transfer Hold Recall time, the transferring Station will receive a recall ring. If the call remains unanswered, the attendant will receive a recall ring for Attendant Recall time. After that, the CO Line will be disconnected and returned to an idle state.

**Operation**
Unscreened CO Line Call Transfer, perform the following:

1. Press the **[TRANS/PGM]** button.
2. Intercom dial tone should be heard and the previous call is placed on hold.
3. Seize a CO Line and dial the number of the external party that will receive the call.
4. Replace the handset and go on-hook.

Screened CO Line Call Transfer:

1. Press the **[TRANS/PGM]** button.
2. The Intercom dial tone should be heard and the previous call is placed on hold.
3. Seize a CO Line and dial the number of the external party that will receive the call.
4. When the called party answers, announce the call transfer.
5. Replace the handset and go on-hook.

**Condition**
1. For this feature, CO Lines (transferred CO Line and transferring CO Line) must be able to detect loop lost or disconnection condition.
2. If transferred and transferring CO are analog lines and if the transferred CO Line doesn't have answer information (analog CO), recalling will not be presented when it is not answered. And, the call will be disconnected after the Unsupervised Conference timer expires.
3. If the transferred line is an ISDN CO call, a recall ring will be presented to the CO Line after Transfer Hold Recall time while the line is released.
4. If you press the original incoming CO Line button while making transfer to an external number (Screened Transfer), the outgoing call is disconnected and the original incoming call is connected.

**Admin Programming**
- Transfer Recall Timer (PGM 180 – FLEX 7)
- I-Hold Recall Timer (PGM 180 – FLEX 5)
- Attendant Recall Timer (PGM 180 – FLEX 1)
- Open Loop Detect Timer (PGM 142 – FLEX 13)
- Unsupervised Conference Timer (PGM 182 – FLEX 6)

*2.3.2.2 Call Transfer to Station*

**Description**

A Call can be transferred to another station within the system. The transfer can be screened (announced) or unscreened to an idle/busy station or Hunt Group. The transferred call will ring and provides an Exclusive Hold flashing indication to the receiving party's DKTU.

If the receiving station does not answer the call in the Transfer Recall time, the transferring station and the transferred station will receive recall. If the call still remains unanswered, the attendant will also receive a recall for the Attendant Recall time. After that, the transferred call will be disconnected.

**Operation**

To transfer to an idle station (unscreened), perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Intercom dial tone should be heard and the previous call will be placed on exclusive hold.
3. Dial the station number that will receive the transfer.
4. Replace the handset or go on-hook.

To transfer to an idle station (screened), perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Intercom dial tone should be heard and the previous call will be placed on exclusive hold.
3. Dial the station number that will receive the transfer.
4. When the station answers, announce the call being transferred.
5. Replace the handset or go on-hook.

To transfer to a busy station, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. The CO Line automatically should be placed on exclusive hold and the ICM busy tone should be heard.
3. The transferred station will receive a muted transferred CO Line ring.
4. If the call is not answered within the designated Transfer Recall time, the CO Line will be recalled to at transferring station and the attendant will receive a recall ring if the call remains unanswered.

To make an unscreened transfer by SLT, perform the following Steps:

1. Press and release the hook-switch, the intercom dial tone should be heard.
2. The CO Line should be placed on exclusive hold, and the Transfer Recall timer will be activated.
3. Dial the Station number the call will be transferred to.
4. Replace the handset and go on-hook.

To make a screened transfer by SLT:

1. Press and release the hook-switch, the intercom dial tone should be heard.
2. The CO Line should be placed on exclusive hold, and the Recall timer will be activated.
3. Dial the station number the call will be transferred to.
4. When the station answers, announce the call being transferred.
5. Replace the handset and go on-hook.

**Condition**

1. When the attendant has a DSS and a station of programmed in DSS receives transferred call, the LED of DSS button in attendant will flashing.
2. When the SLT user is in the screened transfer mode and tries to converse both transferred station and CO Line, the user can activate brokers call with hook-flash.
3. It is impossible to transfer a call to another busy SLT from a SLT. When receiving busy tone, SLT user can be connected to the CO Line with hook-flash.

**Admin Programming**

- Transfer Recall Timer (PGM 180 – FLEX 7)
- I-Hold Recall Timer (PGM 180 – FLEX 5)
- Attendant Recall Timer (PGM 180 – FLEX 1)
- No Touch Answer (PGM 111 – FLEX 7)

## 2.3.3 Holding and Parking

*2.3.3.1 Hold*

**Description**

A Station User can place a call on hold. The following features are available depending on the desired result. The result of the holding operation can be determined by ADMIN programming.

| Feature | Description |
|---|---|
| System Hold | Any Station can retrieve a held call.<br>Another station in the group can seize the CO Line to answer. |
| Exclusive Hold | Only the station user who held the call can retrieve it.<br>Another station in the group cannot seize the CO Line. |

**Operation**

To place a CO Line on Exclusive/System Hold from a DKTU, perform the following Steps:

1. Press the **[HOLD/SAVE]** button once or twice (depending on Hold Preference).
2. To place a CO Line on Exclusive/System Hold from a SLT (depending on Hold Preference), perform the following Steps.
3. Hook-flash and dial 5 6 0 (refer to Ref. A).

To access a CO Line on Exclusive/System Hold from the DKTU where the hold was placed, perform the following Steps:

1. Lift the handset.
2. Press the **{CO}** button,
   OR
3. Dial 8 # and the CO Line number (refer to Ref. B).

To access a CO Line on Exclusive/System Hold from the SLT where the hold was placed, perform the following Steps:

1. Lift the handset.
2. Dial 8 ＊ (refer to Ref. C).

**Condition**

1. The CO Line placed on Exclusive Hold will flash at the Station and the LED of CO Line will light at other stations.
2. The CO Line placed on System Hold will flash at all Stations.
3. When Exclusive Hold is set in a Station, the Exclusive Hold Recall Timer will be initiated. After the Exclusive Hold Recall Timer is expired, the original Station will receive a recall for the duration of the I-Hold Recall Timer.
4. When a System Hold is set at a station, the System Hold Recall Timer will be initiated. After the System Hold Recall Timer expires, the original station will receive a recall for the duration of the I-Recall Timer.
5. When the I-Hold Recall Timer is expired, the Attendant will receive a recall for the duration of the Attendant Recall Timer. If the call remains unanswered for after the Attendant Recall time expires, the call will be disconnected.

**Reference**

**A.** Refer to **ipLDK Installation Manual**, System Hold Code (PGM 106 – FLEX )

**B.** Refer to **ipLDK Installation Manual**, Held Individual CO Line Code (PGM 107 – FLEX 11)

**C.** Refer to **ipLDK Installation Manual**, Access Held CO Group Code (PGM 107 – FLEX 10)

**Admin Programming**

- Hold Preference (PGM 160 – FLEX 8)
- Attendant Recall Timer (PGM 180 – FLEX 1)
- Exclusive Hold Recall Timer (PGM 180 – FLEX 4)
- I-Hold Recall Timer (PGM 180 – FLEX 5)
- System Hold Recall Timer (PGM 180 – FLEX 6)
- Transfer Recall Timer (PGM 180 – FLEX 7)

### *2.3.3.2 Hold Preference*

**Description**

Preferred Hold type is set by ADMIN programming. When a User presses the **[HOLD]** button, the preferred type of Hold is activated. If the user presses the **[HOLD]** button twice, the other type is activated (toggle).

**Operation**

1. If System Hold is set as preferred Hold and the user presses the held the **[HOLD]** button once, the call is held by System Hold (refer to Ref. A).
2. If System Hold is set as preferred Hold and the user presses the held the **[HOLD]** button twice, the call is held by Exclusive Hold (refer to Ref. A).
3. When Exclusive Hold is assigned, another station in the group cannot seize the held call.
4. When System Hold is assigned, another station in the group can seize the held call and answer.

**Reference**

**A.** System Hold / Exclusive Hold: 2.3.3.1

**Admin Programming**

- Hold Preference (PGM 160 – FLEX 8)

### *2.3.3.3 Automatic Hold*

**Description**

When a station is connected to a CO Call, the Station User can make another intercom call just by pressing the DSS button. In this case, the previous CO Call is automatically held.

**Operation**

To use Automatic Hold while on a CO Line call, perform the following Steps:

1. Press a **{CO}** button.
2. When the new CO Line is connected, the previous CO Call is placed the Admin Programmed preferred Hold state.

**Admin Programming**

- Automatic Hold (PGM 112 – FLEX 2)
- Hold Preference (PGM 160 – FLEX 8)

*2.3.3.4 Park*

**Description**
A User can park an ICM or CO call in a virtual location. The User can then make a page announcement for the desired User to pick-up the parked call. The paged user can retrieve the call by dialing the designated location number.

**Operation**
To park a call:

1. Press the **[TRANS/PGM]** button.
2. Dial the parking location 601-608 (refer to Ref. A).
3. Replace the handset or go on-hook.
4. Page the desired User to retrieve the call.

To retrieve the parked call from a DKTU:

1. Lift the Handset or press the **[MON]** button.
2. Dial the parking location to retrieve the parked call.

**Condition**

1. To receive the parked call, the Station should have a **{CO}** or **{LOOP}** button.
2. If the call remains unanswered for the duration of the Call Park Recall time, the original Station that parked the call will receive a recall. If the call is still unanswered, then the attendant will receive the recall. If the Attendant does not answer again in the Attendant Recall time, the CO Line call will be disconnected and the line will be returned to an idle state.
3. In case of ICM call parking, the attendant will not receive recall.

**Reference**
**A.** Refer to **ipLDK Installation Manual**, Call Park Location Code (PGM 107 – FLEX 5)

**Admin Programming**
■Call Park Recall Timer (PGM 180 – FLEX 2)

## 2.3.4 Pickup

**Description**
A station user can pick up a call received at another Station. The following pick-up types are available:

| Type | Description |
|---|---|
| Directed Call Pick up | To pick up a call ringing at another station within the accessible Intercom Tenancy Group (refer to Ref. A). |
| Group Call Pick up | To pick up a call ringing at another station in the same pick-up Group. |

**Reference**
**A.** Intercom Tenancy Group: 2.4.15 (PGM 120)

### *2.3.4.1 Directed Call Pick Up*

**Description**
A station can pick up a call ringing other station by dialing the direct call pick up code (refer to Ref. A) and the ringing station number.

**Operation**
To answer a call ringing at another station:

1. Lift the handset or press the **[MON]** button.
2. Dial Direct Call Pick-up code 7 (refer to Ref. A),
   OR
3. Press the programmed **{Direct Call Pick-up}** button.
4. Dial the Intercom number of the ringing Station.

To assign {DIRECT CALL PICK-UP} button at a flexible button, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Press the FLEX button to be assigned.
3. Dial 7.
4. Press the **[HOLD/SAVE]** button to accept changes.

**Condition**

1. When several calls are queued at a station or hunt group, the pick-up depends on the Pick-up Priority (ADMIN 173).
2. Queued callback and private line cannot be picked up.
3. An intercom call cannot be picked up at a Station in Hold or Park mode.
4. When the same types of CO Lines are queued, the first queued CO Line is picked up.
5. Direct call pick-up is allowed within the intercom tenancy group. A Station cannot pick up any call to the Station which belongs to denied Intercom Tenancy Group (ADMIN 120).
6. A Station can answer an intercom call placed to an ICM box using directed call pick-up.

**Reference**
**A.** Intercom Tenancy Group: 2.4.15 (PGM 120)

**Admin Programming**

- Refer to **ipLDK Installation Manual**, Direct Call Pick up Code (ADMIN107 – FLEX 6)
- PLA Priority Setting - Pick-up Priority (PGM 173)

*2.3.4.2 Group Call Pick Up*

**Description**
A station can pick up a call ringing at another station in the same pick-up group. Ringing intercom calls, incoming CO Lines, recalling CO Lines and transferred CO Lines can be answered by a station instead of the ringing Station if the Stations belong to the same pick-up group (refer to Ref. A).

**Operation**
To answer a call ringing at a Station in the same Pick-up group:

1. Lift the handset or press the **[MON]** button.
2. Dial the Group Pick-up code 5 6 6 (Ref. B).

To assign a **{GROUP CALL PICK-UP}** button at a flexible button:

1. Press **[TRANS/PGM]** button.
2. Press the FLEX button to be assigned.
3. Type 5 6 6 (refer to Ref.B).
4. Press the **[HOLD/SAVE]** button.

**Condition**
1. An intercom call cannot be picked up at a Station in Hold or Park mode.
2. Queued callback and private line calls cannot be picked up.
3. A station can answer an intercom call placed to an ICM box using group call pick-up.
4. When several calls are queued at a Station or Hunt Group, the pick-up order depends on Pick-up Priority (ADMIN 173).
5. When the same types of CO Lines are queued, the first queued CO Line is picked up.
6. Group call pick-up is allowed within the intercom tenancy group. A Station cannot pick up any call to the station that belongs to a denied Intercom Tenancy Group (refer to Ref. C).

**Reference**
**A.** Pick up Attribute: 2.3.4
**B.** Refer to **ipLDK Installation Manual**, Group Call Pick Up Code (PGM 107 – FLEX2)
**C.** Intercom Tenancy Group: 2.4.15

**Admin Programming**
- Pick-up Attribute (PGM 190 – FLEX 2)
- Pick-up Group Attributes (PGM 191)
- PLA Priority Setting (PGM 173) - Pick-up Priority

## 2.3.5 IP Phone Rerouting

**Description**

ipLDK provides a rerouting service when IP phones(IP hard-phone, soft-phone, phontage) are not available (line disconnected, or Network environment failure) for any reason, the call can be routed to his voice mail box or mobile extension.

**Operation**

**Condition**

1. Hunt group call does not follow this reroute service.
2. Only IP Phone is working this reroute feature.

**Reference**

**Admin Programming**

- Auto Forward to VMIB (PGM 113 – F2, F14)
- Forward to VMIB timer(PGM 181 – F20)
- Mobile extension(PGM 236)

# 2.4 Call Handling

## 2.4.1 Absent Text Message

*2.4.1.1 Custom Message*

**Description**

Each station can select from ten (11-20) available custom messages to display on the DKTU LCD. These messages are programmed by the System Attendant (refer to Ref. A) for System-wide use. Individual users may program message 00 as their own custom message.

When setting, the selected message is displayed on the User Station LCD panel.

**Operation**

To program Custom Message 00 from a station:

1. Press the **[TRANS/PGM]** button.
2. Dial 5 2 (Ref. B).
3. Enter the message (refer to Figure 2.4.1.1), up to 24 characters.
4. Press the **[HOLD/SAVE]** button and confirmation tone should be heard.

| | | |
|---|---|---|
| Q – 11<br>Z – 12<br>. – 13<br>1 – 10 | A - 21<br>B - 22<br>C - 23<br>2 - 20 | D - 31<br>E - 32<br>F - 33<br>3 - 30 |
| G – 41<br>H - 42<br>I - 43<br>4 – 40 | J - 51<br>K - 52<br>L - 53<br>5 - 50 | M - 61<br>N - 62<br>O - 63<br>6 - 60 |
| P - 71<br>Q - 72<br>R - 73<br>S – 74<br>7 – 70 | T - 81<br>U - 82<br>V - 83<br>8 - 80 | W - 91<br>X - 92<br>Y - 93<br>Z - 94<br>9 - 90 |
| *1 - Blank<br>*2 - :<br>*3 - , | 0-00 | |

**Figure 2.4.1.1 Keyset Map**

To program Custom Messages 11-20 from the System Attendant, or Station, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 5 3 and the message number (11-20).
3. Enter the message (refer to Figure 2.4.1.1), up to 24 characters.
4. Press the **[HOLD/SAVE]** button and confirmation tone is heard.

To activate LCD Messages (Custom/Pre-selected) from a Station or from the System Attendant, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 5 1.
3. Dial the 2-digit message code 00 or 11-20.
4. Press the **[HOLD/SAVE]** button.

To cancel LCD Messages (Custom/Pre-selected) from a Station:

1. Press the flashing **[DND/FOR]** button or, Press the **[TRANS/PGM]** button.
2. Dial 5 1and the desired number.
3. Press the **[HOLD/SAVE]** button.

To cancel LCD Messages (Custom/Pre-selected) from the System Attendant:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 5 2.
3. Press the **[HOLD/SAVE]** button.

**Reference**

**A.** Attendant: 2.13

**Admin Programming**

■Refer to **ipLDK Installation Manual**, Numbering Plan (PGM 106)

### *2.4.1.2 Pre-selected Message*

**Description**

A User can choose from pre-selected messages (1 to 10) to be shown on the calling party LCD. Detail information is entered by each User (e.g. Time, Date or Station number).

The pre-selected messages include:

- Message 01: LUNCH, RETURN AT HH:MM
- Message 02: ON VACATION /RETURN AT DATE MM:DD
- Message 03: OUT OF OFFICE/RETURN TIME HH:MM
- Message 04: OUT OF OFFICE/RETURN AT DATE MM:DD
- Message 05: OUT OF OFFICE/RETURN UNKNOWN
- Message 06: CALL: (Telephone No: Up to 17 digits)
- Message 07: IN OFFICE: STA XXXX
- Message 08: IN A MEETING/RETURN TIME HH:MM
- Message 09: AT HOME
- Message 10: AT BRANCH OFFICE

**Operation**

To activate LCD Messages (Custom/Pre-selected) from a Station or from the System Attendant, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 5 1.
3. Dial the 2-digit message code 00 or 01-10.
4. Press the **[HOLD/SAVE]** button.

To cancel LCD Messages (Custom/Pre-selected) from a Station, perform the following Steps:

1. Press the flashing **[DND/FOR]** button,
   OR
2. Press the **[TRANS/PGM]** button.
3. Dial 5 1and the desired number.
4. Press the **[HOLD/SAVE]** button.

**Condition**

- If a station assigns call forward while a pre-selected message is activated, the pre-selected message is canceled automatically (refer to Ref. A).
- Users can leave a message at a DKTU or SLT. When leaving a message at the SLT, a DND warning tone will be heard when the handset is lifted as a reminder of the message waiting.
- When a pre-selected message is selected in a DKTU, the **[DND/FOR]** button will flash as applicable.

**Reference**

**A.** Call Forward: 2.3.1

**Admin Programming**

■Refer to **ipLDK Installation Manual**, Numbering Plan (PGM 106)

## 2.4.2 Alarm

**Description**
The system can be programmed to recognize the status of an external contact from a relay (open or closed). When activated, the System will signal programmed Stations with a single tone repeated per 1-min. interval or a continuous tone. This capability is commonly employed to provide remote alarm signals. When used as an alarm, the assigned Stations receive the programmed signal. To stop the signal, the alarm should be deactivated (reset) from a Station assigned to receive the alarm signal.

**Operation**
At detecting the Alarm contact, the system sends the appropriate alarm signal to assigned stations.

To terminate the alarm signal while the line is in an idle state:

1. Dial 5 6 5; a confirmation tone should be heard.
2. The alarm signal will be terminated at all assigned stations.

**Condition**
- An external contact should be connected to the alarm input.
- The alarm contacts should be dry (no voltage/current source connected).
- SLT cannot receive alarm signals.
- Alarm Reset can be programmed on a flexible button.
- When the Alarm Mode is set to Door (Bell) in PGM163-F3 irrespective of the Once/Repeat setting, it will only call the assigned keyset/keysets for 3 seconds at every operation of the door contact and does not require the Alarm Reset code to be dialed

**Admin Programming**
- Alarm Enable (PGM 163 – FLEX 1)
- Alarm Contact Type (PGM 163 – FLEX 2)
- Alarm Mode (PGM163 – FLEX 3)
- Alarm Signal Mode (PGM 163 – FLEX 4)
- Station Alarm Attribute (PGM 113 – FLEX10)

## 2.4.3 Automatic Privacy

**Description**
Automatic privacy allows a Station User to suspend automatic privacy for an existing CO line conversation without invitation. By default, all conversations that take place on CO lines, the Intercom, and Conferences are protected by privacy (Automatic privacy).

***NOTE**—ADMIN programming (ADMIN program 161 – FLEX 5) is required to enable or disable this feature.*

If automatic privacy is enabled, when pressing a busy CO line button, a busy tone will be heard.

If automatic privacy is disabled, when pressing a busy CO line button, the Station is connected to the conversation in progress.

**Condition**
- When Automatic Privacy is disabled, privacy is still activated for Intercom and Conference calls.
- A Station can only override a privacy-disabled Station.
- The Station will present an Intrusion tone when another Station accesses the line.

**Admin Programming**

- Auto Privacy (PGM 161 – FLEX 5)
- Privacy Warning Tone (PGM 161 – FLEX 6)
- Override Privilege (PGM 113 – FLEX 4)

## 2.4.4 BGM (Background Music)

**Description**

A user can listen to BGM through the speaker while handset is on-hook and the line is in an idle state.

Music from the source is heard over the station speaker and will be automatically shut-off when a call or paging announcement is received, or when the station is off-hook.

**Operation**

To assign background music at a station, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 7 3; the available music should be heard.

To transmit background music on an external page port at the Attendant Station, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 7 6 (External port).
3. Dial the background music channel number; the selected background music should be heard.
4. Press the **[HOLD/SAVE]** button.
5. After hearing the confirmation tone, the station should go to an idle state, and the selected background music will be transmitted or an external port.

To transmit background music through the intercom box at an Attendant Station, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 7 5.
3. Dial the background music channel number and the selected background music is heard.
4. Press the **[HOLD/SAVE]** button.
5. After hearing the confirmation tone, the station should go to an idle state, and the selected background music will be transmitted over the intercom box.

**Condition**

- When lifting the handset or pressing the **[MON]** button at a Station, the music is automatically shut-off.
- When external music is assigned, the music source should be connected to the MBU.
- The same music source can be used with MOH.
- Press the **[VOLUME]** button to adjust volume while the background music is heard.
- The BGM may be blocked in an intercom box by pressing **[DND/FOR]** button.

**Reference**

**A.** MOH: 2.4.17

**Admin Programming**

- Background Music Type (PGM 171 – FLEX 1)

## 2.4.5 Camp-on

### Description

- When a User calls a busy Station, the busy tone should be heard. The User can give a signal to the busy Station. The busy Station (off-hook or on speakerphone) is notified of the call waiting by a camp-on tone and the **[HOLD/SAVE]** button LED flash.
- A SLT User may notify a busy Station of an outside CO call or internal call waiting (camp-on tone).

### Operation

To activate Camp-on while receiving the Intercom busy tone, perform the following Steps:

1. Dial ＊ or the last digit of the busy station,
   OR
2. Press the busy DSS flexible button, or the flexible button assigned as **{Camp-On}**.

To answer a Camp-on call while receiving the Intercom busy tone, perform the following Steps:

1. Press the **[HOLD/SAVE]** button; the active CO line is placed on exclusive hold and the call waiting is connected.
2. Press the **[HOLD/SAVE]** button, to alternately talk with both parties.

To activate Call Waiting on an SLT while receiving the Intercom busy tone, perform the following Steps:

1. Go Off-hook, then dial * or the last digit of the dialed Station number.
2. When answered, the call should be announced,
   OR
3. Replace the handset and go on-hook.

To answer the call waiting/camp-on, perform the following Steps:

1. When the SLT station is busy, the camp-on tone is heard indicating a camp-on call.
2. Hook-flash and dial 5 6 0 (refer to Ref. A).
3. The SLT Station should be connected to the camp-on call.
4. Hook-flash and dial 5 6 0 again, to connect to the original Station call (If original call is CO line, this CO call can not be reconnected again. Only intercom call is supported).

To assign the {Camp-On} button at a flexible button:

1. Press **[TRANS/PGM]**.
2. Press the FLEX button to be assigned.
3. Press the **[TRANS/ PGM]** button.
4. Type 8 5.
5. Press the **[HOLD/SAVE]** button to save changes.

### Condition

1. During a conference or paging, Call Waiting is not activated (refer to Ref B, Ref C).
2. Camp-on is not applied to a station which is in DND mode (refer to Ref. D).
3. The Attendant can override a Station using the Camp-on feature (refer to Ref. E).
4. If the Stop Camp-on Tone (ADMIN program 112 – FLEX 15) is set to ENABLE, the camp-on tone will not be heard.

### Reference

**A.** Refer to ipLDK Installation Manual, System Hold Code (ADMIN 106 – FLEX 17)

**B.** Conference: 2.7

**C.** Paging: 2.8

**D.** DND: 2.4.9

**E.** Attendant Override: 2.13.5

### Admin Programming

- Stop Camp-on Tone (PGM 112 – FLEX 15)
- Voice Over (PGM 113 – FLEX 6): Voice over is also applied to SLT.

## 2.4.6 Change Ring Type

**Description**
The ring tone signal used to notify Stations of an incoming call can be changed in ADMIN Programming to provide distinctive ringing on a per CO line basis. A distinctive ring tone can be programmed for each CO line that is used to ring each Station.

**Button Configuration for Distinct Ring Frequency (PGM 422)**

| FLEX | ITEM | RANGE | DEFAULT | REAMRK |
|---|---|---|---|---|
| 1 | Ring 1 | 0000 - 9999 | T1: -<br>T2: - | Nation specific |
| 2 | Ring 2 | 0000 - 9999 | T1: -<br>T2: - | Nation specific |
| 3 | Ring 3 | 0000 – 9999 | T1: -<br>T2: - | Nation specific |
| 4 | Ring 4 | 0000 – 9999 | T1: -<br>T2: - | Nation specific |

**Admin Programming**
- CO Distinct Ring (PGM 142 – FLEX 5)
- Ring Frequency (PGM 422)

## 2.4.7 Data Line Security

**Description**
Once Data Line Security (ADMIN program 111 – FLEX 4) is set on a Station, communication between the Station and another party is protected from signals such as overriding, and Camp-on to the Station (refer to Ref. A).

This status should primarily be used for modems and fax Stations.

**Condition**
- If an analog extension (Data, Fax, Modem), assigned data line security, makes an external call via ISDN line, 3.1 KHz Setup message will be sent to an ISDN CO line instead of the speech Setup message.
- If a busy station, is assigned data line security, receives an incoming CO call, the call is disconnected regardless of the DID/DISA Destination setting.

**Reference**
**A.** Camp-On: 2.4.5
**B.** Attendant Override: 2.13.5
**C.** Call Transfer: 2.3.2

**Admin Programming**
- Data Line Security (PGM 111 – FLEX 4)

## 2.4.8 Dialing Security

**Description**
The dialed phone number may not be displayed on the LCD of the called station when calling with a speed dial number (refer to Ref. A).

**Operation**
To program a speed dial number with security dialing:

***NOTE:*** *If speed dial starts with * is operated with dialing security.*

1. Press the **[TRANS/MON]** button.
2. Press **[SPEED]** button.
3. Dial speed dial bin number.
4. Press * button.
5. Dial the desired speed number.
6. Press **[HOLD]** button.

To activate a speed dial with security dialing:

1. Press **[SPEED]** button.
2. Enter the Speed dial bin number which was programmed with dialing security.

**Condition**
- Dialed phone numbers with Dialing Security are included in SMDR information (refer to Ref. B).
- This feature applies to transferred or recalled CO calls.
- This feature applies to redial calls (refer to Ref. C).

**Reference**
**A.** Speed Dialing: 2.2.8

**B.** SMDR: 2.12

**C.** Redial: 2.2.8

## 2.4.9 DND (Do Not Disturb)

**Description**
Placing a station in DND eliminates incoming outside line ringing, intercom calls, transfers and paging announcements. While in DND, the station will not receive calls on CO lines. The Attendant can override a station in DND (see Ref. A). Stations in DND can continue to make normal outgoing calls. Station users can individually have the ability to place their station in DND (ADMIN program 114). By default, DND is available at all stations.

**Operation**
To activate DND from a DKTU:

1. Press the **[DND/FOR]** button.

To deactivate DND from a DKTU:

1. Press the **[DND/FOR]** button again.

**Condition**
- Pressing the **[DND/FOR]** button during call forward or a pre-selected message, will not activate DND; call forward or the pre-selected message will be released.
- When a Station assigned to preset call forward is in DND mode, and an incoming call is received at the next station by ring assignment (refer to Ref. B).
- Attendant can override a station which is in DND by Camp-on or Intrusion (refer to Ref. A).
- Attendant may cancel DND for one or all stations.

**Reference**
**A.** Attendant Intrusion, Override: 2.13.4, 2.13.5

**B.** Ring Assignment: 2.1.1

**Admin Programming**
■Do-Not-Disturb (PGM 111)

## 2.4.10 One Time DND (Do Not Disturb)

**Description**
One Time DND allows a Station User to turn off muted ringing that occurs when off-hook (handset or **[MON]**) while on another call. The station, while off hook, depresses the DND button which eliminates muted ringing. When the station goes on-hook the DND button is extinguished and DND is cancelled.

**Operation**
To activate One-time DND from a DKTU:

1. While in an off-hook state or connecting a CO line or intercom call, press the **[DND/FOR]** button.
2. The station is in DND; the **[DND/FOR]** button LED should light.
3. When the station goes to an idle state, DND is released at the station; the **[DND/FOR]** button LED will be extinguished.

**Admin Programming**
■Do-Not-Disturb (PGM 111 – FLEX 3)

## 2.4.11 Flash

**Description**
**CO Flash**—Provides station users with the ability to terminate an outside call or transfer a call without hanging up. A **[FLASH]** button is located on each DKTU.

The flash type and duration of each CO line are assigned by the system.

**Flash on ICM Call**—This feature enables Station Users to utilize the **[FLASH]** button for terminating pages and intercom calls. While paging or on an intercom call, press the **[FLASH]** button to terminate the call and return to the intercom dial tone.

**Operation**
To assign a Flash at flex button:

1. Press the **[TRANS]** button.
2. Press desired any flex button.
3. Press the **[TRANS]** and Dial 94.
4. Press **[Hold]**.

To perform a Flash while on a CO line call:

1. Press the **[FLASH]** button.

To generate a flash while on a CO line from a SLT:

1. Press the hook-switch slightly
2. Dial 5 5 1 (refer to Ref. A).

**Condition**

1. The Flash command is not activated on ISDN CO lines.
2. A Station that isn't permitted to access CO line cannot initiate a flash.
3. During a flash, the LED of CO line will flash.

**Admin Programming**

- Refer to **ipLDK Installation Manual**, Flash Command to CO Line Code (PGM 106 – FLEX 8)
- Flash Type (PGM 141 – FLEX 7)
- CO Flash Timer (PGM 142 - FLEX 12)
- SLT Hook-switch Bounce Timer (PGM 182 – FLEX 1)
- SLT Maximum Hook-switch Flash Timer (PGM 182 – FLEX 2)
- SLT Minimum Hook-switch Flash Timer (PGM 182 – FLEX 3)

## 2.4.12 Flexible Buttons

**Description**
Flexible buttons are customized by either ADMIN or station programming.

The programmable Flexible buttons include:

- **CO Line**—Automatically accesses the assigned line (User Programmable).
- **DSS/BLF**—Automatically indicates the assigned station and provides BLF for off-hook and DND (User Programmable).

- **Flexible Numbering Plan Code**—Any Feature with a dialing code (Paging, Account code, Call Park, etc.) can be assigned to a flexible button (User Programmable).
- **Speed Dial**—Automatically dials Speed Number (System, Station, Saved Number Redial, Last number Redial) (User Programmable).
- **Group Access**—Hunt Group pilot number (User Programmable).
- **Pool Group Access**—Some or all outside lines can be grouped; pressing this button accesses the highest numbered unused CO line in that group (User Programmable).
- **Loop**—Used to answer a transferred call on l line for which a user does not have a button assigned (User Programmable).
- **Station Assignment**—Allows assignment of stations and complete flexibility within the system numbering plan. A station can be assigned a number (100-399).
- **4/8 button**—Feature code assign.
- **Telephone Number** —Automatically dials an outside Telephone Number (It is possible on LDP DKTU which 3 soft key.)

| Feature Button | Feature Code |
|---|---|
| Conference | 91 |
| Call Back | 92 |
| DND/Forward | 93 |
| Flash | 94 |
| Mute | 95 |
| MON | 96 |
| Redial | 97 |

### Operation

The Flexible buttons are programmable individually at each keyset, and are used by pressing the applicable FLEX button.

To assign a flexible button:

1. Press the **[TRANS/PGM]** button.
2. Press the FLEX button to be assigned.
3. Press the **[TRANS/PGM]** button.
4. Type the Feature Code (refer to Flex Button Programming Codes in the ADMIN Programming Manual).
5. Press the **[HOLD/SAVE]** button to save changes.

To assign a direct button (i.e., CO or DSS button):

1. Press the **[TRANS/PGM]** button.
2. Press the FLEX Button to be assigned.
3. Type the desired Code.
4. Press the **[HOLD/SAVE]** button.

To assign Telephone Number (LDP-6000/7000):

1. Press the **[TRANS/PGM]** button.
2. Press the FLEX Button to be assigned.
3. Press the **[TEL NUM]** soft button.
4. Type the desired telephone number.
5. Press the **[HOLD/SAVE]** button.

### Condition

- A flexible button that is not assigned as **{CO Line}** button is considered a Feature button and is programmable at each Station.
- When ADMIN program 112 - FLEX 6 (CO Line Programming) is enabled, the flexible button that is assigned as **{CO line}** button can be programmed.

**Admin Programming**

- Flexible Button Assignment (PGM 115)
- CO Line Programming (PGM 112 – FLEX 6)

## 2.4.13 Headset

**Description**

An industry standard headset can be connected to a Station instead of handset. The Station is programmed for headset operation in place of speakerphone operation.

**Operation**

To change the Station mode for Speakerphone or Headset:

1. Press the **[TRANS/PGM]** button.
2. Dial code 7 5.
3. The Station Answer mode should be displayed on the LCD.
4. Dial code 1 (Speaker mode) or 0 (Headset mode).

To change the Headset Ring mode:

1. Press the **[TRANS/PGM]** button.
2. Dial code 7 6.
3. The Station Answer mode should be displayed on the LCD.
4. Dial the applicable code
   - 1 = Speaker ring only
   - 2 = Headset only
   - 3 = Both

**Condition**

- The intercom signaling mode (HF/TN/PV – **[TRANS/PGM]** + **1** + **2**) can be set in Headset and Speaker phone mode.
- In Headset mode, the User can select an incoming ring mode to hear ringing with the speaker, headset, or both by Admin programming.
- The station will receive paging with the Station speaker.
- To answer an intercom call in Tone mode, the User should press the **[MON]** button.
- When an intercom call is received in Privacy mode, the station will be muted automatically. User should press the **[MUTE]** button to answer the intercom call.

**Admin Programming**

- Headset Ring Mode (PGM 111 – FLEX 10)
- Speakerphone/Headset (PGM 111 – FLEX 11)

## 2.4.14 Intercom Signal Mode

**Description**
Users can control the method by which they receive intercom calls and signals.

Stations equipped with a speakerphone can select one of the available 3 signaling modes:

- **HF—**Hands Free. The station user, upon hearing a tone burst and voice announcement over the speaker, can reply hands free.
- **TN—**Tone. A standard tone ring notifies the party of an incoming intercom call. The called party answers by lifting the handset or pressing the **[MON]** button.
- **PV—**Privacy. The station user receives a tone burst and a voice announcement over the speaker. The microphone is deactivated for privacy. The called party must lift the handset or press the **[MUTE]** button to answer the call.

**Operation**
To assign the Intercom Signal mode, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 1 2; the confirmation tone should be heard.
3. Dial the signal mode type (1 = HF, 2 =TN, 3 = PV).
4. Press the **[HOLD/SAVE]** button and confirmation tone is heard.

**Condition**
- In Message Wait/ICM Queuing/Call Transfer/ Attendant Override, the ring is received with TN mode regardless of the assigned Intercom Signal mode (refer to Ref. A, Ref. B, Ref. C).
- Intercom signal mode will not affect the voice announcements from internal/all call paging (refer to Ref. D).

**Reference**
**A.** Message Wait: 2.4.16

**B.** Call Transfer: 2.3.2

**C.** Attendant Override: 2.13.5

**D.** Paging: 2.8

## 2.4.15 Intercom Tenancy Group

**Description**

A station can be assigned to one of the Intercom Tenancy Groups. Each Intercom Tenancy Group can be operated independently and Stations in the group can be assigned an individual CO Group to use. A maximum of 5 or 15 Intercom Tenancy Groups can be assigned.

Each group can be assigned by the Attendant and can be programmed to allow or deny calls to other groups. Stations in a Group are allowed access to other Stations based on the allow access of the calling Group.

| FLEX | DEFAULT | RANGE | REMARK |
|---|---|---|---|
| 1 | - | STA No. | Attendant Station of assigned Intercom Tenancy Group |
| 2 | GROUP 01 | FLEX1-5(ipLDK-20/100)<br>FLEX1-15(ipLDK-300/300E) | Intercom Tenancy Groups allow to access for the assigned groups |

When a call to another intercom Tenancy Group is allowed, CO line or Station calls, pick-up and transfer features are activated.

**Condition**

- When a call to another Intercom Tenancy Group is denied, call pick-up cannot be activated.
- It is not allowed for stations to have the same station numbers regardless of if belong to different intercom tenancy groups.
- The attendant of an Intercom Tenancy Group can be any station in the system, and it is not affected by Intercom Tenancy Group access.
- When the Attendant of an Intercom Tenancy Group sets the Day/Night/Weekend mode, it will affect only their assigned Intercom Tenancy Group.

**Reference**

**A.** Pick-Up: 2.3.4

**Admin Programming**

- Intercom Group Number (PGM 111 – FLEX 13)
- Intercom Tenancy Group (PGM 120)

## 2.4.16 Message Wait / Call Back

**Description**

**Message Wait**—A station user can notify another Station User that he wishes to talk to the user. The notified station user can return the call or a message left at the station. When responding to the Station, the User can answer messages left on the Station in sequential order (up to 5 messages).

**Call Back**—A station can initiate a call back request on a busy station. Once that station becomes idle, the station that left the call back request will be signaled.

A station with a message waiting can receive periodic audible reminders of a message waiting. This tone is sent to Stations only while idle and is presented over the speaker.

**Operation**

To leave a message wait at an idle station that does not answer or is in DND mode, perform the following Steps:

1. Press the **[CALLBK]** button; a confirmation tone should be heard.
2. The **[CALLBK]** button LED at the receiving station will flash.
3. To answer a message wait, perform the following Steps:
    1. Press the flashing **[CALLBK]** button.
    2. The station that left the message will receive an intercom ring.

To leave a call back at a busy station, perform the following Steps:

1. Press the **[CALLBK]** button; a confirmation tone should be heard.
2. Replace the handset.
3. When the receiving station hangs up the current call, the station leaving the message will receive an intercom ring.
4. When the intercom call is answered, the callback request will be removed.

To leave a message wait at a SLT, perform the following Steps:

1. Hook-flash.
2. Dial 5 5 6 (refer to Ref. A); a confirmation tone should be heard
3. Replace the handset.

To answer the message wait, perform the following Steps:

1. Lift the handset; an indication tone should be heard.
2. Dial 5 5 7 (refer to Ref. B).
3. The station leaving the message will receive an intercom ring.

***NOTE**—If a voice message is recorded on a pulse-type SLT(PGM 110), the recorded message will be played by dialing message wait retrieval code (5 5 7). The played message will be deleted automatically after being played. When more than one message is recorded, after the first message a warning tone will be heard to indicate remaining messages. To retrieve another message, dial 5 5 7 again. The callback will ring with Tone mode regardless of intercom signaling mode (refer to Ref. C).*

To queue a call back on a busy SLT, perform the following Steps:

1. Hook-flash.
2. Dial 5 5 6 while busy tone is heard.
3. Confirmation tone should be heard; replace the handset.
4. When the SLT returns to an idle state, the intercom ring is received.

**Condition**

- A Station can leave only one callback or message; a new request will override the previous one.
- Message wait data will be protected with power failure.
- When dialing the station number instead of pressing the **[CALLBK]** button to answer a message wait, the message wait will be canceled in the calling station.
- Message wait reminder tone is programmable from 00 to 60 min. If you don't want to present the tone, the timer may be set to 00.
- Message wait reminder tone is not heard at a busy station.
- Message wait reminder tone will continue until all the messages are retrieved.
- When a station attempts to leave a message at a station which has already 5 messages and one of those is not equal to the attempting station, error tone will be heard. When VMIB access is allowed in the station, after recording VMIB message, it turns to normal message in the station. In this case, error tone will not be provided in the attempting station.

**Reference**

**A.** Refer to **ipLDK Installation Manual**, Message Wait/Callback Enable Code (ADMIN 106 – FLEX 13)

**B.** Refer to **ipLDK Installation Manual**, Message Wait/Callback Enable Code (ADMIN 106 – FLEX 14)

**C.** Intercom Signaling Mode: 2.4.14

**D.** DND: 2.4.9

## 2.4.17 MOH (Music On Hold)

**Description**

When a CO call is placed on hold (refer to Ref. A), the external party will hear music.

MOH is supplied through various music sources. Music can be played to any party on hold. The following music sources are available:

- Internal Music
- External Music
- SLT MOH

**Operation**

The following values are associated with MOH:

| ipLDK-20 | ipLDK-100 | ipLDK-300/300E |
|---|---|---|
| 0 = Not assigned<br>1 = Internal Music<br>2 = External Music<br>3 = VMIB MOH<br>4 – 8 = SLT MOH<br>9 = Hold Tone | 0 = Not assigned<br>1 = Internal Music<br>2 – 4 = External Music<br>5 – 6 = VMIB MOH<br>7 – 11 = SLT MOH<br>12 = Hold Tone | 0 = Not assigned<br>1 = Internal Music<br>2 - 4 = External Music<br>5 - 7 = VMIB MOH<br>8 - 12 = SLT MOH<br>13 = Hold Tone |

**Condition**

- Only 1 MOH channel is supported.
- SLT ports connected with MOHU can provide MOH channels.

**Reference**

**A.** Hold: 2.3.3.1

**B.** VMIB MOH: 2.4.17.2

**Admin Programming**

■CO Line MOH (PGN 142 – FLEX 6)

■MOH Type (PGM 171 – FLEX 2)

*2.4.17.1 SLT MOH*

**Description**
When a CO line call is placed in the hold state (refer to Ref. A), the external party will hear music.

| ipLDK-20 | ipLDK-100 | ipLDK-300/300E |
|---|---|---|
| 0 = Not assigned<br>4 – 8 = SLT MOH<br>9 = Hold Tone | 0 = Not assigned<br>7 – 11 = SLT MOH<br>12 = Hold Tone | 0 = Not assigned<br>8 - 12 = SLT MOH<br>13 = Hold Tone |

**Operation**
SLT MOH Type Assign:

1. Press the **[TRANS/PGM]** button.
2. Type 171.
3. Press **[FLEX 4].**
4. Enter the SLT Station Number.
5. Press the **[HOLD/SAVE]** button.
6. Press the **[TRANS/PGM]** button.
7. Type 171.
8. Press **[FLEX 2].**
9. Enter SLT MOH type (refer to values listed).
10. Press the **[HOLD/SAVE]** button to accept changes.

**Condition**
- SLT ports connected with MOHU can provide MOH channels.
- Up to 5 SLT ports can be used as MOH channels.
- To use a SLT port as a MOH channel, assign the desired SLT port with the MOH channel, and connect the MOHU to the SLT port.

**Reference**
**A.** Hold: 2.3.3.1

**Admin Programming**
- CO Line MOH (PGM 142 – FLEX 6)
- MOH Type (PGM 171 – FLEX 2)
- Assign SLT MOH (PGM 171 – FLEX 4)

## 2.4.18 Mute

**Description**
During a conversation, pressing the **[MUTE]** button will disable the handset microphone or the speakerphone for privacy while continuing to listen to the other party on the phone through the handset or speaker. Pressing the **[MUTE]** button again, will reactivate the microphone.

**Operation**
To mute the transmitting audio, while on a call:

1. Press the **[MUTE]** button.
2. The **[MUTE]** button LED should illuminate (the connected party will not be able to hear the voice on the muted Station).

To restore transmission, perform the following Steps:

1. Press the illuminated **[MUTE]** button.
2. The LED of the **[MUTE]** button is extinguished and transmission is restored.

**Condition**
- When changing from the speakerphone to the handset, mute is released.
- When pressing another DSS button, the mute state will not be changed.

## 2.4.19 MWI (Message Wait Indication) – SLT Feature

**Description**
If the SLT station receives a message from another User, then the SLT LED will flash indicating a message is waiting.

**Condition**
- When lifting handset, user will hear DND warning tone indicating message waiting.
- When a message waiting indication prompt is recorded in the System greeting 097, a voice announcement will be heard instead of the DND warning tone.

**Admin Programming**
- Station ID Assignment (PGM 110 - FLEX 1)

## 2.4.20 On-Hook dialing

**Description**
A station can make a call without lifting the handset by using the speakerphone or monitor mode.

If this feature does not operate, verify if the speakerphone is enabled or disabled. On-hook dialing is not available on all keysets.

**Operation**
To use On-hook dialing, perform the following Steps:

1. Verify the Auto Speaker Selection is ON.
2. Assign CO line/Intercom/Speed Dial to a flexible button
3. Press the flexible button.
4. Then it is operated immediately,
   OR
5. Verify the Auto Speaker Selection OFF.
6. Assign CO line/Intercom/Speed Dial to a flexible button
7. Press the flexible button.
8. LIFT HANDSET should be displayed on the LCD.
9. Lift handset or press the **[MON]** button to operate.

**Admin Programming**
■Auto Speaker Selection (PGM 111 – FLEX 1)

## 2.4.21 Station Name

**Description**
Each station may be assigned with a name up to 12 characters, and also a System and Station speed dial number up to 12 characters.

The System will allow Station Users to dial Station numbers by entering a name that has been programmed for the Station (via intercom). When the names are programmed in the digital display keyset, the user may select a Station or Speed dial number by the name.

**Operation**
To register Station Name, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Type 74.
3. Type in the Name (12 Characters, refer to Figure 2.4.21)
4. Press **[HOLD/SAVE]** to accept changes.

| | | |
|---|---|---|
| Q – 11<br>Z – 12<br>. – 13<br>1 – 10 | A - 21<br>B - 22<br>C - 23<br>2 - 20 | D - 31<br>E - 32<br>F - 33<br>3 - 30 |
| G – 41<br>H - 42<br>I - 43<br>4 – 40 | J - 51<br>K - 52<br>L - 53<br>5 - 50 | M - 61<br>N - 62<br>O - 63<br>6 - 60 |
| P - 71<br>Q - 72<br>R - 73<br>S - 74<br>7 – 70 | T - 81<br>U - 82<br>V - 83<br>8 - 80 | W - 91<br>X - 92<br>Y - 93<br>Z - 94<br>9 - 90 |
| *1 - Blank<br>*2 - :<br>*3 - , | 0-00 | # |

**Figure 2.4.21 Keyset Map**

To access Dial by Name, perform the following Steps:

1. Press the **[SPEED]** button twice.
2. Dial the desired directory (1-3, refer to values).
   - 1 = Intercom
   - 2 = Station Speed Dial
   - 3 = System Speed Dial
3. A confirmation tone should be heard.
4. The stored names in the speed bin are displayed in alphabetical order.

***NOTE**—The up and down arrows can be used to locate the desired name.*

To search a name by entering a character, perform the following Steps:

1. While two names are displayed on the LCD, enter alpha-numeric data (refer to Figure 2.4.21).
2. The LCD displays 2 names which start with the entered character (the cursor will point to the first name in the LCD).
3. When entering more alpha-numeric data, then LCD will display names that start with the updated input.

***NOTE**—To delete the last letter of input, press the **[CALLBK]** button. The up and down arrows also can be used to locate the desired name.*

4. When the appropriate name is displayed, move the cursor to point at the name.
5. Press the **[HOLD/SAVE]** button to make a call.

To search a name by scrolling, perform the following Steps:

1. While two names are displayed in the LCD window.
2. Use the up and down arrow keys to locate the desired name.
3. When the appropriate name is displayed, move the cursor so it points directly at the name.
4. Press the **[HOLD/SAVE]** button to make a call.

To register the name in SLT, perform the following Steps:

1. Lift the handset.
2. Dial 5 6 3 (refer to Ref. A); a confirmation tone should be heard.
3. Dial 7 4 (Name Register code).
4. Enter the name (up to 12 letters; refer Figure 2.4.21)
5. Hook-flash to save.

**Condition**

- Dial by name is only available on a DKTU with LCD.
- The name must be registered to use Dial By Name.
- If an invalid Group is dialed, an error tone will be heard.
- In SLT and DKTU with no LCD, only the station name can be entered.
- The speed dial without name will not be listed by Dial By Name.

**Reference**

**A.** Refer to **ipLDK Installation Manual**, Programming Mode Enter Code (ADMIN 106 – FLEX 20)

## 2.4.22 Station Programming

**Description**

The system supports multiple hierarchical menus based on station programming. Users can program Stations by selecting the desired menu (refer to table). The Attendant also can program a station and the Attendant Station the same way (refer to Ref. A).

**Station Programming Menu**

| Main Menu | Sub Menu | Options | Remark |
|---|---|---|---|
| **[1]** RING | [1] TYPE | 1,2,3,4 | DKTU |
| | [2] ANSWER MODE | H(1)/T(2)/P(3) | |
| | [3] SMS MSG DISPLAY | | |
| | [4] ENBLOCK MODE | 1: ON/0OFF | |
| | [5] SMS/NOTICE DISPLAY | 1: ON/0OFF | Korea Only |
| | [6] SCROLL SPEED | 1: ON/0OFF | Korea Only |
| | [7] EAR-MIC HEADSET | 1: ON/0OFF | LDP Keyset Only |
| | [8] ICM BELL | | LDP Keyset Only |
| | [9] CO BELL | | LDP Keyset Only |
| **[2]** COS | [1] COS DOWN | ICM/COS7 | |
| | [2] COS RESTORE | ENTER AUTHO CODE | |
| | [3] WALKING COS | ENTER AUTHO CODE | |
| | [4] COS CHANGE | | India Only |
| **[3]**AUTH / MOBILE - EXT | [1] AUTH. REGISTER | | |
| | [2] AUTH. CHANGE | | |
| | [3] REG MOBILE-EXT | | |
| | [4] ACTIVE MOBILE-EXT | | |
| | [5] REG MOBILE-EXT CLI | | |
| | [6] ACTIVE MOBILE HUNT | | |
| **[4]** TIME / CONF-ROOM | [1] SET WAKE UP TIME | ONCE/PERMANENT | |
| | [2] WAKE UP DISABLE | | |
| | [3] ACTIVE CONF-ROOM | | |
| | [4] DEACTIVE CONF-ROOM | | |
| | [5] CALL COVER ATTR | [1] CALL COVER MODE<br>[2] DELAY RING CYCLE | |
| **[5]** MESSAGE | [1]SET PRESELECTED MSG | 00 – 10 | |
| | [2] SET CUSTOM MSG | None | |
| **[6]** ANNOUNCE | [1]RECORD USER GREETING | | |
| | [2] LISTEN TIME / DATE | | |
| | [3]LISTEN STA NUMBER | | |
| | [4] LISTEN STA STATUS | | |
| | [5] RECORD PAGE MSG | | |
| | [6] ERASE USER GREETING | | |
| | [7] ERASE PAGE MSG | | |
| **[7]** SUPPLEMENTARY | [1]LCD DISPLAY LANGUAGE | DOMESTIC/ENGLISH | DKTU |
| | [2]MBU VERSION DISPLAY | | |
| | [3] BGM | | |
| | [4]REGISTER STA NAME | | 2/8FLEX/SLT |
| | [5] SPK/HEADSET | SPEAKER/HEADSET | |
| | [6]HEADSET RING MODE | SPEAKER/HEADSET/BOTH | |
| | [7] WTU STA NUM RCVR | | |
| | [8] SERIAL NUMBER | | |
| | [9] PC-PHONE LOCK KEY | | |
| | [*] USB AWYS CALL REC | | |
| **[0]** ATTENDANT | | | ATD ONLY |
| **[*]** SYSTEM | [#] ENTER ADMIN | | ADMIN ONLY |
| | [1] RELOCATION OUT | | |
| | [2] RELOCATION IN | | |
| | [3] REGISTER BLUETOOTH | | |
| | [4] BLUETOOTH USAGE | | |
| | [0] HOTDESK LOGIN | | |
| | [*] HOTDESK LOGOUT | | |

**Operation**
To enter programming mode:

1. Press the **[TRANS/PGM]** button.
2. The Main Menu should display.
3. Use the Up and Down arrow keys to view other choices in the Main Menu, Sub-Menu and the corresponding options.

To select a menu, perform the following Steps:

1. Dial the number of the desired menu item.
2. If the selected menu is a programming item.
3. If there is available sub-menu, selectable menu is displayed on the LCD.

***NOTE**—Press the **[TRANS/PGM]** button to move the top menu. Press the **[REDIAL]** button to move the previous menu.*

**Condition**
- After a menu is programmed, the previous menu list is displayed on the LCD.
- Pressing a flexible button in the Main Menu mode, will activate the flexible button programming mode.

**Admin Programming**
- Refer to the ipLDK Admin Programming Manual, Station Programming (Section 4 Quick Reference Admin Programming Tables)
- Refer to the ipLDK Admin Programming Manual, Attendant Programming (refer to Section 4 Quick Reference Admin Programming Tables)

## 2.4.23 Station Relocation

**Description**
The Station Relocation Feature lets a user unplug their station and plug it into another location. Dialing a code brings all the station attributes including station number, button mapping, speed dial, and class of service (see Ref.A) to the new location.

**Operation**
To store the station attributes to a temporary buffer, perform the following Steps:

1. Dial the feature code **[TRANS]** * 1 (Station Relocation Backup).
2. Unplug the station.

To retrieve stored station attributes, perform the following Steps:

1. Plug the phone in at another properly wired jack.
2. Dial **[TRANS]** * 2 (Station Relocation Retrieve).
3. The station will be relocated; all Station attributes are copied to the current Station location.

**Condition**
- All information for the port of the destination Station will be retained so that it may be copied or relocated to another port.
- If a different Station type is plugged in at a location, preprogrammed **{DSS}** buttons are not guaranteed.
- DKTUs must be relocated to another digital port, DKTUs cannot be relocated to an SLT port.

**Reference**
**A.** Class of Service: 2.5.4

## 2.4.24 Station Serial Call

**Description**
Using DSS flexible buttons, Users can place consecutive Intercom calls without returning the line to an idle state (no need to hang-up) between calls.

**Operation**
To use serial calling, perform the following Steps:

1. Press the appropriate DSS flexible button; the old call will be disconnected and a new call will be established.

## 2.4.25 Time & Date Setup (Digital Network)

**Description**
In an outgoing call, the ISDN network will send the appropriate time & date in the CONNECT message when the called party answers.

**Operation**
To set the time & date using the Digital Network, perform the following:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 4 6 and 1 (Yes).
3. Press the **[HOLD/SAVE]** button.

**Condition**
- This feature may be set at the Attendant Station and using Admin Programming.
- The time & date can be set to a default value or changed based on seasonal time changes.

## 2.4.26 Voice Over

**Description**
This feature provides voice announcements at a busy station without interrupting the existing conversation. The announcement is received over the existing conversation so that only the busy station hears both incoming parties. The user can alternately talk back to both parties.

**Operation**
To use Voice Over:

1. A busy station is called and camped-on by a new caller (refer to Ref. A)
2. The busy station hears a warning tone over the current voice path indicating the camped-on call.
3. The busy Station can communicate with new caller by pressing **[HOLD/SAVE]** button, then previous caller can hear MOH and can wait.
4. And if busy Station press **[HOLD]** button again, busy Station can communicate with previous caller again, and then new caller hear MOH again.
5. Alternate between the new call and the current call by pressing the **[HOLD/SAVE]** button; the **[HOLD/SAVE]** button LED should flash at 60ipm while Voice Over is in use.
6. When placing each call on hold to converse with the other, that call will hear MOH.

**Condition**

- Placing a station in DND will disable voice over function.
- Attendant can activate voice over at the station in DND mode.
- After voice over is activated, both calls will be dropped if the busy Station that receives the calls hangs up. If either of the callers hangs up, the **[HOLD/SAVE]** LED will be extinguished and the remaining call will be connected as in the normal talking state following presentation of a confirmation tone.
- The holding party will receive MOH if provided (refer to Ref. B).
- The recall timer is not activated during voice over.
- Every time the busy Station switches between the callers, a confirmation tone should be provided.
- If the busy Station is using the handset, voice over will be activated via the handset. Likewise, if busy Station is using the speaker, voice over will be activated using the speaker.
- Voice over is operated when busy station has an allowance to receive voice –over (PGM 113 –Flex 6) and a new caller has an privilege to make voice-over (PGM 111-Flex 22).

**Reference**

**A.** Camp-On: 2.4.5

**B.** MOH: 2.4.17

**Admin Programming**

- Voice Over (PGM 113 – FLEX 6)
- Caller Voice Over (PGM 111 - FLEX 22)

## 2.4.27 Wakeup

**Description**

Each attendant or station user can set an alarm as a wake-up call or reminder. This feature can be programmed to activate only once or to repeat daily. If the user goes off-hook during the alarm, a special dial tone will be presented.

**Operation**

To register a wake-up time alarm from the Attendant Station, perform the following:

1. Press the **[TRANS/PGM] button**.
2. Dial 0 4 2.
3. Dial the station range to be alerted, if a single station is to receive the alarm, enter ＊ instead of a second station number.
4. Dial the desired time the alert should display (2-digit hour and minute, 24-hour mode.
5. Dial # to have the alarm alert once only.
6. Press the **[HOLD/SAVE]** button.

To cancel a wake-up alarm from the Attendant Station, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 4 3.
3. Dial the station range that was to be alerted, if a single station is to receive alarm, enter ＊ instead of a second station.
4. Press the **[HOLD/SAVE]** button.

To register wake-up time alarm from a Station, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 4 1.
3. Dial the desired 2-digit hour and minute for alerting.
4. Dial # to have the alarm alert once only.
5. Press the **[HOLD/SAVE]** button.

To cancel a wake-up time from a Station, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 4 2.
3. Press the **[HOLD/SAVE]** button.

**Condition**

- If a wake-up alarm is registered at a station, a ＊'is displayed in front of the present time on the LCD.
- If VMIB is installed, the voice message for the wake-up time is heard 3 times and then MOH is heard.
- If the wake-up ring is not answered after 3 times, it is canceled.
- If the System Attendant dials to wake-up fail station to erase wake-up fail ring, the fail ring will disappear with confirmation tone. But when the Wake-up Fail Ring timer expires, confirmation tone will not be provided and Fail Ring will disappear.
- If **[Wake-up Fail Ring Timer]** is 0, wake-up fail ring will not disappear automatically.
- If **[Wake-up Fail Ring Timer]** is 99, the fail ring is not given to attendant station.
- If **[Wake-up Fail Ring Timer]** is 1-98, after Wake-up Fail Ring Timer expires, the wake-up fail ring will disappear automatically.

**Admin Programming**

■Wake-up Fail Ring Timer (PGM 182 - FLEX 7)

## 2.4.28 Automatic Fax Transfer

***(ipLDK-20)***

**Description**

The system will determine if an incoming call from the preprogrammed CO line is for a FAX or for speech terminal by detecting the tone of the call (1100Hz, 0.5s ON/3s OFF repeated). When the system detects a FAX tone from the incoming line within the predetermined time, the System will transfer the call to the appropriate FAX Station. If the FAX tone is not detected within predetermined time, the System will transfer the call to the appropriate Station(s).

**Condition**

- Only one CO line can be programmed as a FAX CO line. If the FAX CO line is not programmed, Automatic Fax Transfer will not be activated.
- Station 17 is used as the FAX Station. The FAX machine should be connected to the port for Station 17 to use this feature.
- If the FAX CO line is not answered within the FAX CO call time, the incoming call will be disconnected.
- Outside caller connected to the FAX CO line will hear a ring back tone while the system is detecting a FAX tone.
- In order to transfer calls from the FAX to a FAX station, do not assign CO ring to the FAX Station 17.
- If a CO line is programmed for DISA and for Automatic FAX Transfer as well, incoming calls from that CO line are served as DISA calls. So, if a user wants to call the FAX station, just call station 17 by exploiting DISA call.
- When the FAX machine goes idle after a FAX call, the associated CO line is released.
- If the FAX CO line is disconnected during a FAX call, the CO line is released and the FAX machine will return to an idle state.
- Only Analog lines are enabled for using this feature.

**Admin Programming**

■Auto FAX Transfer CO (PGM 161, FLEX17 )

■FAX tone Detect Timer (PGM 182, FLEX13)

■FAX CO Call Timer (PGM 182,FLEX14)

## 2.4.29 Mobile Extension

**Description**
A mobile user is able to use the phone as extension of the ipLDK system to receive incoming and make outgoing calls when the mobile phone number is registered to the ipLDK System.

**Operation**
To register a mobile extension number in DKTU:

1. Press the **[PGM]** button.
2. Dial 33.
3. Dial the mobile phone number that is being registered.
4. Press the **[HOLD/SAVE]** button.

To activate (deactivate) a mobile extension, perform the following Steps:

1. Press the **[PGM]** button
2. Dial 34.
3. Dial 1 to activate the extension, or 0 to deactivate it.
4. Press the **[HOLD/SAVE]** button.

To assign the **{Activate(Deactivate) Mobile extension}** button at a flexible button:

1. Press the **[TRANS/PGM]** button.
2. Press a flexible button.
3. Press the **[TRANS/PGM]** button.
4. Dial 34
5. Press the **[HOLD/SAVE]** button.

To register the mobile extension CLI number in DKT:

1. Press the **[PGM]** + 35.
2. Dial the mobile CLI number
3. Press the **[HOLD]** button.

To use the mobile extension in case of Hunt group member:

1. Press the **[PGM]** + 36.
2. Dial the '1' to activate, or '0' to deactivate
3. Press the **[HOLD]** button.

To assign the **{Use in case of Hunt member}** button at a flexible button:

1. Press the **[TRANS/PGM]** button.
2. Press a flexible button.
3. Press the **[TRANS/PGM]** button.
4. Dial 36
5. Press the **[HOLD/SAVE]** button.

To use Voice Message Notification to Mobile:

1. Press the **[PGM]** + 37.
2. Dial the '1' to activate, or '0' to deactivate
3. Press the **[HOLD]** button.

Incoming call through DID, ICM or Transferring call:

1. The call to the extension which has the preprogrammed mobile extension is routed to both an extension and a mobile extension.

2. When incoming call is answered at an extension or a mobile extension, the other will stop ringing.
3. If mobile extension answers, an extension goes to Mobile-Ext In Used State **[IN USE AT MOBILE EXT]**.
4. Under the Mobile-Ext In Used Sate, extension could not receive any digit.
5. If another extension tries to call the extension of Mobile-Ext In Used State, busy tone is heard. Call Waiting is not supported at the circumstance, but user can leave a message wait to extension of Mobile-Ext In Used State.

Transferring call from the mobile extension through ipLDK system:

1. Dial the transfer code (*) during the talk state in Mobile extension.
2. The mobile extension user hears the internal dial tone and the calling party hears the MOH.
3. Dial the extension number.
4. The call will be transferred after the mobile extension user goes on-hook state.
5. The mobile extension user can reconnect the call by pressing the code (#) in case extension does not answer.
6. Mobile Extension can transfer a call to another station's mobile extension.

To make outgoing calls from the mobile extension through the ipLDK system:

1. The mobile extension user dials his DID number of ipLDK system, the internal dial tone should be heard.
2. The mobile extension can proceed to make an internal or outgoing call with CLI number of extension.

**Condition**

- If the extension is busy, forwarded, or in the DND state, calls will not be routed to the mobile extension.
- When making an external call from a mobile extension through the ipLDK system, it sends the CLI number of the Station extension; the mobile extension cannot use the transfer feature
- After the no answer timer expires, a call will be routed to the DID no answer destination (the no answer timer of the ipLDK system is shorter than GSM).
- This feature applies only to ISDN/DCO/SIP Lines, ICM call and transferred call
- The message wait or call back feature is not supported on mobile extensions.
- The networking feature is not supported on mobile extensions.
- When on a mobile extension conversation through the ipLDK, the DTMF receiver is dedicated to the mobile extension.
- Mobile extension can transfer the call to the other extension or their own extension. If he tries to seize CO line or to dial the Hunt Group or dial other destination except extension, an error tone will be provided.
- If the "Transfer recall" timer is expired, a call is not routed to the extension associated with mobile extension.
- Outgoing call from mobile extension is restricted by internal station's COS.
- Mobile extension can receive the Calling Party number or his own extension CLI number as CLI (according to PGM 143-FLEX7-CLI Transit: ORI / CFW)
- To use "Transferring call / outgoing call from mobile extension" feature, CO line connected with the mobile extension should be set to DID line.
- When a mobile extension calls his own DID number of ipLDK system to make CO call, ipLDK system checks the CLI of the mobile extension number. If the CLI is matched with 'Mobile Extension Number' or 'Mobile CLI' which registered to his extension, the system provides CO dial tone and allows to make CO outgoing call through ipLDK system.
- Though the extension is member of Hunt Gr. (except Ring Hunt Gr.), a call is routed to the mobile extension. To use the mobile extension in case of Hunt group member, Hunt call should be programmed in PGM236-FLEX5.
- Mobile Extension can transfer a call to another station's mobile extension.
- If VOI CO line was used for H.323 gatekeeper or SIP protocol, system can use these line for calling to mobile. In other words, Gatekeeper and SIP CO line to connect between extension and mobile can be supported for mobile call.
- In case of SMS service(PGM 37) for Mobile Extension, SMS board must be installed.

**Admin Programming**

■Mobile Extension Register (PGM 236)

## 2.4.30 Remote control with Mobile Extension

**Description**
If the mobile user DID's to their own station, they will receive intercom dial tone and can control the basic status of extension with control code.

**Operation**
1. The mobile extension user dials his DID number of ipLDK system.
2. Then he receives internal dial tone.
3. He can enter "the remote control menu" with the fixed code and then confirmation tone will be provided.(The fixed code will be added to Flexible numbering plan.)
4. He can select the desirable menu.
5. He hears the dial tone.

*Remote control menu,*
-. 1: Activate Mobile extension
-. 2: Deactivate Mobile extension
-. 3: Fwd to DVU
-. 4: cancel Fwd to DVU
-. 5: Activate UCD DND (Agent log out)
-. 6: Deactivate UCD DND (Agent log in)

**Condition**

**Admin Programming**
■Remote Mobile extension control code **(PGM 109 - FLEX7)**

## 2.4.31 Extend CO-to-CO Connection

When a call is made between two analog CO lines using DISA or off-net call forward, the call duration is limited by the unsupervised conference timer. After the unsupervised conference timer expires, the call will be dropped by the ipLDK system. This feature is enabled to extend unsupervised conference time for as long as the caller wants. If this feature is activated, the DTMF receiver device is assigned to caller-side CO lines.

**Operation**
When the CO to CO unsupervised conference timer extend feature is activated, two analog CO lines on a conversation will hear a warning tone 15 seconds before the unsupervised conference timer expires and the call will be disconnected.

To extend call duration, perform the following Steps:

1. Dial the unsupervised conference timer extension code number, and the extension time multiple digit data (1-9).
2. The ipLDK system will re-assign the unsupervised conference timer to the multiple of the entered digits.

***Ex.)*** *The unsupervised conference timer is set to 10 minutes and the entered digit is 3, then the timer will be extended to 30 minutes.*

**Condition**
- To use this feature, at least one IDLE DTMF device must exist.
- This feature is only available on analog CO-to-CO calls using DISA or off-net call forward.

**Admin Programming**

- Unsupervised Conference Timer Extend Enable (PGM 160 – FLEX18)
- Unsupervised Conference Timer Extend Code (PGM 109 – FLEX 6)
- Unsupervised Conference Timer (PGM182 – FLEX 6)

## 2.4.32 Forced Hands-free Mode

**Description**

A DKTU caller can temporarily change the answering mode of the called party DKTU (tone mode -> hands free mode).

**Operation**

To activate forced hands free mode, perform the following Steps:

1. During a tone mode call to a DKTU.
2. When the user hears a ring back tone, dial the forced hands free code (#).
3. The called party DKTU will stop ringing and the speaker and microphone will be activated (operate as hands free mode).

**Condition**

- If the DKTU is changed to hands-free mode, the connection tone will be provided and the voice path is connected.
- If the called party DKTU is set to linked-pair station, the answer mode of the called party will be not changed.
- If the calling party DKTU is set a linked-pair station, the calling party DKTU can use the forced hands free mode.
- If called party DKT is set a Mobile-Ext, this feature will be not applied.
- Only the calling party DKT of which value of PGM 111-19 is ON can use this feature.
- After connection, related feature with hands free mode is not applied.( ex. call back )

**Admin Programming**

- Forced Hands-Free Mode (PGM 111- FLEX 19)

## 2.4.33 Hot Desk

**Description**

A hot desk enables the user to dynamically select a Station using a login / logout operation without having a fixed station. For example, in a call center or marketing department people can share work stations with one another.

**Operation**

To activate hot desk operation at a dummy station, perform the following Steps:

1. User goes Off-hook or presses the **[MON]** button.
2. Dial the authorization code, and then press the # key (If Authorization Code is set to 5 digits, the # is not needed).
3. The Station restores the User's database (station number, COS, ring assign, etc.) and can receive incoming calls.

To logout a User, perform the following Steps:

1. Press the **[PGM].**
2. Dial the User Logout code (logout code "**"), or press the programmed **[Agent Logout]** flex button. (To program Agent Logout at Flex button: Press **[Trans/PGM]** + Flex-Button + **[Trans/PGM]** + "**")
3. User can select the call forward type (refer to values) using the volume up/down keys.
   - Off-net speed 000
   - Mobile extension
   - VMIB
   - VM group
4. Press the **[HOLD]** button.
5. The User database is saved and the Station returns to the dummy state.

**Condition**

- A dummy station will display "DUMMY STATION (xxx)" (xxx = the physical Station number).
- A dummy station only allows login operation; all other operations are not allowed.
- Logout operation is only allowed for dummy Stations where a user has logged-in.
- Total number of Users is restricted by the System Station capacity. The total number of hot-desk Users = the total number of Stations – Installed number of Stations – 1.
- A hot-desk User must have own password.
- Saved User database information includes:
- Station Number.
- Station Attributes (PGM 111-124).
- CO Routing (Ring Assign, DID routing ).
- Hunt Group Membership.
- Voice Mail.
- If user tries to log-in at another station without logging-out of a dummy Station, the previous used Station return to the dummy state automatically.
- The hot-desk will automatically log-off there is no activity at the DKTU within the Auto Log-Out Timer.
- If Hot desk logged out with the forward type of "No Call Forward?", the call will be forwarded to Attendant.
- The button map of the hot-desk will not be changed even though a User logs-on to a different type of DKTU (it is recommend that the same type of DKTU is used for Hot-Desk Station).
- Only DKTUs (with more than 12 button) and WKTs can be used as dummy stations.
- The modem associated with the Station cannot log in (PGM 170).
- When the System reset happens, all login agents are automatically logged-out.

**Admin Programming**

- Dummy Station ON/OFF (PGM 112 / B TN 23)
- Authorization Code Table (PGM227)
- Number of Agents (PGM 250- FLEX 1)
- Assign Station Number of Agents (PGM 250- FLEX 2)
- Agent Auto Logout Timer (PGM 250-FLEX 3)

## 2.4.34 Analogue CLI Display

**Description**

The ipLDK System supports the following CLI protocol specifications:

- Bellcore GR-30-CORE & SR-TSV-002476 & ETSI ETS 300 659, ETSI ETS 300 778
- Denmark, TDK-TS 900 216
- Sweden, Telecom specification 8211-A112, Standard SS 63 63 25

**Operation**
When an incoming CO call is received at a CO line board:

1. The CLI information is detected by hardware and is distributed to station.

**Condition**
- If an incoming CO call is assigned to multiple SLTs of a same slot, the CO rings are generated sequentially with a 1 second interval on the SLTs; CLI is displayed on the SLT after the first ring.
- For CLI display on the SLT, a Ring Phase (PGM 182 - FLEX4) more than 4 seconds is recommended.
- If the ring phase is less than 4 seconds, some of the SLTs will not receive CLI display signal.

**Admin Programming**
- CID ATTR (PGM 185)

## 2.4.35 Call Log

**Description**
The Call Log feature enables the DKTU telephone User to view a log of the last (15-50) incoming and outgoing calls. The User can scroll the list of numbers stored, select the desired number and activate a redial to that number.

The log includes the CLI (or dialed number), the time, the date and Station/System Speed name of the call, it is stored on the MPB and is retained if the Station is unplugged or replaced.

The Call-logs for incoming /Outgoing/Lost calls are available if a flexible button is programmed to be used for **{CALL LOG}**.

**Operation**
To program a Call Log flexible button, perform the following:

1. Press the **[TRANS/PGM]** button.
2. Press the flexible button to be assigned.
3. Type the Call Log code, then press the **[TRANS/PGM]** button.
4. Dial 57.
5. Press the **[HOLD/SAVE]** button.

To use the Call Log feature of the DKTU, perform the following:

1. Press the programmed **{CALL LOG}** button.
2. The User can scroll through the numbers by pressing the up//down navigation buttons to locate received calls, dialed calls, and lost calls.
3. When the CLI of the desired number is displayed, press the OK key; the System will establish a call to that number.
4. Select the Lost Call Menu to view CLI MSG-Wait numbers. A number in the Lost Call list can be answered, deleted, or saved by pressing the Select soft button.

**Condition**
- To use this feature, a flexible must be programmed for **{CALL LOG}**.
- Administrator can program the Call Log List number, in the range of 15-50, per Station (PGM 160 – FLEX19)
- When the Call Log List number is programmed, the All Call Log database will be initialized.
- Maximum Call Log List per system.
- 500: ipLDK-20

- 2000: ipLDK-100
- 5000: ipLDK-300
- 10000: ipLDK-300E
- The System assigns the Call Log list from the first available port in order.
- Must enable CLI MSG-Wait to be able to use the Lost Call Log.

**Admin Programming**

- Call Log List Number (PGM 160 – FLEX19)
- CLI MSG-Wait (PGM 114 – FLEX4)

## 2.4.36 In-Room Indication

**Description**

A supervisor can press the In-Room Indication button and **[HOLD/SAVE]** button when in an idle state; then each Station's In-Room Indication LED will illuminate.

10 groups can be programmed. Each group has at most 20 members excluding Supervisor.

To program a flexible button as the "In-Room Indication button"

1. Press the **[TRANS/PGM]** button and the flexible button to be assigned.
2. Dial the code (**[TRANS/PGM]** + *8 + Room NO(bin no))
3. Press the **[HOLD/SAVE]** button.

**Operation**

To Active or Deactivate In-Room Indication button,

1. Check if Supervisor station is the idle state and In-Room Indication button is programmed.
2. Press In-Room Indication button and press **[HOLD/SAVE button]**.

**Condition**

- If Supervisor station is not Idle, In-Room Indication button does not work.
- If a station press the In-Room Indication button but the station is not supervisor, an error tone is heard.
- If **[HOLD/SAVE]** button is not pressed within 5 seconds after In-Room Indication button pressed, the station goes back to the Idle state.

**Admin Programming**

- In-Room Indication Supervisor (PGM183 – Flex1)
- In-Room Indication Member (PGM183 – Flex2)

## 2.4.37 Chime Bell

**Description**

If Chime Bell Activate Station press Chime Bell button, Chime Bell Receive Station starts to ring.
To program a flexible button as the "Chime Bell button", perform the following steps:

1. Press the **[TRANS/PGM]** button and the flexible button to be assigned.
2. Dial the code (**[TRANS/PGM]** + *9 )
3. Press the **[HOLD/SAVE]** button.

**Operation**
To Active or Chime Bell,

1. Press Chime Bell button at the Chime Bell Activate station.

**Condition**
- The ring stops when Chime Bell Timer expires.
- Chime Bell Ring Cannot be answered.
- If Chime Bell Receive station is busy or Off-Hook state, the station gets Mute ring instead.
- Chime Bell master and slave station should be keyset.
- Chime Bell can not be set linked pair.

**Admin Programming**
- Chime Bell Station Pair (PGM184 – Flex1)
- Chime Bell Relay (PGM184 – Flex2)
- Chime Bell Timer (PGM184 – Flex3)
- Chime Bell Frequency (PGM184 – Flex4)

## 2.4.38 Emergency Intrusion

**Description**
If Emergency Supervisor Station calls other station and the Supervisor is heard busy tone, the Supervisor can dial Emergency Intrusion code and makes conversation directly with the called station.

**Operation**

To activate Emergency Intrusion, perform the following step:

1. Just dial Emergency Intrusion code '#' while listening to the busy tone.

**Condition**
- Emergency Intrusion call is only possible when calling station is set to Emergency Supervisor.
- If the station was talking to other station or CO line, the call is disconnected when the station receives Emergency Intrusion call.
- The busy station is connected to Emergency supervisor only after short indication with beep tone.
- Emergency Intrusion call is not possible to a station in DND state.
- Emergency Intrusion call is not possible to attendant.
- Emergency Intrusion call is also possible to Net DSS.
- Emergency supervisor is connected to Master station of Linked pair if both of Master and Slave are busy.
- Emergency supervisor is connected to Secretary station instead of Executive station.
- If SLT user tries to emergency intrusion to busy Net station, SLT user must do **[Hook-Flash] + [#].**

**Admin Programming**
- Emergency Supervisor 4.1.3.24 (PGM 112 – FLEX 24)

## 2.4.39 Forced Trunk Disconnect

**Description**
Forced Trunk Disconnect feature allows an authorized user (Emergency Supervisor) to disconnect another extension's active outside call, and then the user can make an outgoing call on the released line.

This feature is used in an emergency when no other line is available.

> ***NOTE:*** *This feature is used in case of emergency, so only authorized user can use it. Station base program will be implemented for this feature.*

**Operation**
To activate forced trunk disconnect feature:

1. Seize CO line.
2. The user hears busy tone and dial "forced trunk disconnect-#" code.
3. Busy line goes to idle and he hears a dial tone.

**Condition**
- Forced Trunk Disconnect Feature is only possible when station is set to Emergency Supervisor.
- In some countries, it is not possible to release the network connection from the destination line because the call is controlled by the originating party. In this case, Emergency Supervisor feature supported about only outgoing call

**Admin Programming**
- Emergency Supervisor(PGM112_FLEX24)

## 2.4.40 Barge In

**Description**
Barge in permits an authorized extension to intrude into other existing outside/internal calls. Between intruding extension and parties on initial calls a conference call is established.

There are Two Barging In operations.

- Monitor - The intruding extension can listen to the existing conversation.
- Speech - The intruding extension can join to the existing conversation.

**Operation**
Monitor:
1. Call to the busy station and user hears the busy tone.
2. Press the "MONITOR" button on 3 soft buttons. (**Use Navi > Key to Display**)
3. Caller can listen to the existing conversation. The others hears 'Warning Tone'

Speech:
1. During caller listen to the existing conversation, press the "JOIN" button on 3 soft buttons.
2. Caller can join the conversation. The others hear "Intrusion Tone".
3. Supervisor can cancel the conversation with "DROP" button on 3 soft buttons
4. Supervisor can exit from barge-in by hang up the phone.

**Condition**

- This feature is only supported for DKTU with 3 soft buttons.
- This feature is only available for called party is talk state (with CO Line or Station).
- Barge-In supervisor can see the other party of called station before monitor operation.

**Admin Programming**

- Barge In mode (PGM 113 – FLEX 13)

## 2.4.41 Station Call Coverage

**Description**

This feature permits the user (a covering station user) to receive ring and answer calls directed to a covered station. A Flex button is assigned at the covering station for calls to the covered station. A station can have multiple Call Coverage buttons each covering a different station and multiple stations can have a Call Coverage button for a covered station.

When a covered station rings, the **CALL COVERAGE** button LED will flash and the covering station may receive ring (immediate or delayed) for the call. The covering station can answer the call using the **{CALL COVERAGE}** button, terminating ring at other stations. Once answered, the LED of **{CALL COVERAGE}** buttons for the station at other covering stations will extinguish.

**Operation**

To assign Call-Coverage button to flexible button (program by call coverage station):

1. Press **[TRANS/PGM]** button.
2. Press Flexible to program Call Coverage button.
3. Press **[TRANS/PGM]** button and dial 46.
4. Enter Station number to coverage.
5. Press **[HOLD/SAVE]** button.

To set Cal-Coverage Attributes (station program by call coverage originated station):

1. Press **[TRANS/PGM]** button.
2. Dial 45.
3. Dial 1 to program call coverage mode.
4. Enter 1 to activate call-coverage (0 to disable).
5. Press **[HOLD/SAVE].**

Call-Coverage Delay Ring Cycle:

1. Press **[TRANS/PGM].**
2. Dial 45.
3. Dial 2 to enter call coverage delay ring cycle.
4. Dial delay ring cycle (0 -9).
5. Press **[HOLD/SAVE]**.

Once the Button is assigned on the station and a call:

1. The coverage station receives audible and visual indications after a programmable delay when there is a ring on the originating station.
2. The ring tone is the normal internal or external ring tone cadence and the oldest call coverage button flashes faster than the others and the others flash the same as the incoming ring rate.

3. The coverage station user presses one of flashing Coverage Flex Buttons on their station, or presses ON/OFF Button, or lift the handset. The call will be answered and will cease to ring and led flash at any other stations that may have the same coverage appearance.

The LCD display for internal incoming call is : < XXXX : originator station ; YYYY : caller >

| | |
|---|---|
| CALL FOR STA XXXX<br>FROM YYYY TIME | CALL FOR STA XXXX<br>FROM YYYY TIME |
| < when receives an call coverage ring > | < when press call coverage button > |

The LCD display for CO incoming call is : < XXXX : originator station ; YYYY : caller; ZZZZ: coverage station >

| | |
|---|---|
| CALL FOR STA XXXX<br>YYYY TIME | STATION ZZZZ (T)<br>YYYY TIME |
| < when receives an call coverage ring > | < when press call coverage button > |

**Condition**

- Multiple coverage stations can have the same remote ringing station(s) programmed on their keysets.
- Once a coverage station answers the call, all the related rings are stopped and the call is picked-up by the coverage station.
- The station user assigns the call coverage button at their station via the Flex Button programming sequence.
- If the coverage station is in DND, no audible ring will be heard.
- Call coverage do not support hunt group members.
- Call coverage do not support DECT/SLT/WIT terminals.

**Admin Programming**

To activate Call coverage at a Station:

1. Press the **[TRANS/PGM]**.
2. Enter 45.

To activate Call coverage at a flexible button:

1. Press the **[TRANS/PGM]** button.
2. Press the FLEXIBLE Button to be programmed and the press the **[TRANS/PGM]** button again.
3. Enter 4 6, then enter the Station number.
4. Press **[HOLD/SAVE].**

## 2.4.42 Station Port Blocking

**Description**

The station port can be blocked by admin program. All calls are not available from/to the blocked station port.

**Condition**

- Attendants cannot be port blocked by admin programming.
- ADMIN programming enable station can not be set port blocking.
- A Port blocked station can not be set linked pair.
- If Station A(110) and B(111) are linked pair with number A(110), these stations set port block, two stations are port blocked at the same time, but if terminate linked pair, these two stations are still port blocked, and terminate port block by each station.

**Admin Programming**

■Station Port Block (PGM113-FLEX15)

## 2.4.43 DND Operation of Pre-selected MSG Station

**Description**

If user set Pre-selected Message, user can receive the ring from DID/DISA CO and ICM call or not, by [P-MSG DND] Admin. In other words, if [P-MSG DND] Admin of some station is ON, then when Pre-selected Message feature is set at this station, CO and ICM ring is treated just like DND feature.

So, if this station receives ICM call, pre-selected message will be shown to calling station with busy tone. And if this station receives DID CO call from external user, external user will hear busy tone with busy message. And if DISA CO, external user will hear "Do not disturb" Voice Message and can retry again.

**Operation**

[P-MSG DND] admin is off:

1. Call to Station XXX and Station XXX was set Pre-Selected MSG feature.
2. Station XXX can get the ring.
3. Caller hears ring-back tone.

[P-MSG DND] admin is on:

1. Call to Station XXX and Station XXX was set Pre-Selected MSG feature.
2. Station XXX doesn't receive the ring.
3. Caller hears busy tone.

**Condition**

- This feature does not work when CO direct Ring Assign feature to station (PGM144) is set.

**Admin Programming**

■P-MSG DND (PGM 113 – FLEX 16)

## 2.4.44 DID/DISA Call Routing of DND Station

**Description**

DID/DISA call is routed to specific destination, when calling station is DND state. And if some station is set Pre-selected Message DND operation, in this case DID/DISA call also will be routed through DND destination.

There are three destinations (Tone/Attendant/Hunt Group). These flows is same at DID/DISA the others Destination (PGM 167). DND/P-MSG rerouted flow is same with busy reroute flow.

**Operation**

Rerouting destination is Tone:

1. Call to Station XXX and Station XXX is DND or Pre-Selected MSG SET state.
2. Caller hears busy tone

Rerouting destination is Attendant:

1. Call to Station XXX and Station XXX is DND or Pre-Selected MSG SET state.
2. This call will be routed at Attendant.

Rerouting destination is Hunt Group:

1. Call to Station XXX and Station XXX is DND or Pre-Selected MSG SET state.
2. This call will be routed to assigned hunt group.

**Condition**

- If [P-MSG DND] Admin is off, route operation doesn't work even tough station is Pre-Selected MSG state.
- This Admin is added at PGM167-F4, so previous admin (VMIB PROMPT USAGE admin and others Rerouted Destination admin) is move to next flex-button

**Admin Programming**

- DND Destination (PGM 167 – FLEX 4)

## 2.4.45 Incoming CO Ring assignment to Networking System

**Description**

User can assign CO ring to network system user. Only one Net-Station can be assigned by Net Destination.

Now we have four type destinations (Station / Hunt Group / DVU / Net-Station). And only one type received the ring. In other words, all of type can not receive the ring at the same time. The priority type of the ring is Net-Station and Hunt Group and DVU and Station.

If all of network-CO line is busy, incoming call will flow error destination program (PGM167 Button2).

**Operation**

*To set Incoming CO Ring Assign to Net-Station*:

1. PGM144 and choose CO line.
2. Select Net-Station type and assign Net-Station number.
3. These CO line call will be routed to assigned network-user.

*Deliver the ring to destination*:

1. External part seizes assigned CO line.
2. If ring assignment is to Net-Station, system searches idle Net CO line.
3. If there is useful idle CO line, system makes the NET call for Net-Destination-Station.
4. If there is not idle CO line, this call routed to Error-Destination.

Rerouting destination is Hunt Group:

1. Call to Station XXX and Station XXX is DND or Pre-Selected MSG SET state.
2. This call will be routed to assigned hunt group.

**Condition**

- This feature is based on Network feature.

**Admin Programming**

- Network Station is Added for Assign Destination (PGM 144)

# 2.5 Call Barring

## 2.5.1 Account Code

**Description**
An account code is used to identify outgoing call for accounting and billing purposes, the account code is appended to the SMDR Call record. A company uses an account code for each User Station so that the company can identify and bill (where applicable) calls made from each Station. An account code may use up to a maximum of 12digits (1-12).

**Operation**
To enter an account code before accessing a CO line, perform the following Steps:

1. Press the programmed **{ACCOUNT CODE}** flexible button (or dial 550 from SLT ). Refer to Ref A for code.
2. Dial the account code (max. 12 digits) (Followed by * key if less than 12 digits).
3. Intercom dial tone should be heard and a CO line is secured to make a call.

To enter an account code during a conversation with an external party:

1. Press the **{ACCOUNT CODE}** flexible button(or Recall / Flash and dial 550 from SLT).
2. Dial the account code (max. 12 digits).
3. Press the **{ACCOUNT CODE}** flexible button, the user will be reconnected to the external party (or press * from SLT).

To enter an account code without the **{ACCOUNT CODE}** flexible button during a conversation with an external party:

1. Press the **[TRANS/PGM]** button.
2. Dial 5 5 0 (refer to Ref. A).
3. Dial the account code (maximum 12 digits) (Followed by * key if less than 12 digits), then reconnect to the external party.

To assign an **{ACCOUNT CODE}** flexible button to access the account code feature:

1. Press the **[TRANS/PGM]** button.
2. Press the FLEX button.
3. Press the **[TRANS/PGM]** button.
4. Type 8 0.
5. Press the **[HOLD/SAVE]** button to accept changes.

**Condition**
- While entering the account code, the current call is put on mute mode.
- The user may enter the account code before a call conversation is established.

**Reference**
**A.** SMDR Account Enter Code (ADMIN 106 – Flex 10)

**ADMIN Programming**
- Refer to **ipLDK Hardware Description and Installation Manual**
- SMDR Account Enter Code (ADMIN 106 – Flex 10)

## 2.5.2 Authorization Code

**Description**

If the Station or CO line is programmed to enter the authorization code by ADMIN programming, the authorization code must be entered to access CO line. An authorization code can be used for SMDR, DISA account code.

> ***NOTE****—Personal authorization codes should be kept secure by the System Attendant and individual Station Users to avoid fraudulent phone calls being made.*

An authorization code is assigned as a fixed 5 digit or as 3 - 11 digits as applicable; each station has a different authorization code.

> ***NOTE****— Authorization Code Length set 3~11 or 5 digit in PGM161-F21.*

**Operation**

To access a CO line using an authorization code, perform the following Steps:

1. When attempting CO line access, a DND warning tone or System Announcement will be heard.
2. Enter the authorization code, and press the # key (if authorization code is set to 5 digits, the # key is not needed).
3. If valid, the CO line will be connected; if not valid, an error tone will be presented.

To register the authorization code on a Station:

1. Press the **[TRANS/PGM]** button.
2. Type **3 1**(Authorization Code feature).
3. For 3~11 digit codes**:** Enter the desired authorization code, and press the # key.
4. For fixed 5 digit codes: Enter the desired Authorization Code and Press the **[HOLD/SAVE]** button to accept changes.

To change the authorization code at a Station:

1. Press the **[TRANS/PGM]** button.
2. Type **3 2**.
3. Enter the current authorization code.(Followed by # if 3~11 digit or {Hold/Save} if fixed 5 digit codes are in use)
4. Type in the new authorization code.(Followed by # if 3~11 digit or {Hold/Save} if fixed 5 digit codes are in use)

**Condition**

- Up to 200 authorization codes can be programmed on the System.
- Duplicate authorization codes cannot be assigned to more than one Station.
- If Loop LCR ACNT is set on a Station, the authorization code is required when the station dials the Loop LCR CO Access code (refer to Ref. A).
- If you use authorization code for a DECT authentication, you have to set 5 digits authorization for the DECT.

**Reference**

**A.** LCR: 2.2.7

**Admin Programming**

- Authorization Code Table (PGM 227)
- DISA Account Code (PGM 141)
- CO Line Group Account (PGM 141)
- Loop LCR Account Code (PGM 111)
- 5 Digit Authorization Code Usage (PGM 161-FLEX21)
- Station Account (PGM112-FLEX20)

## 2.5.3 Automatic Call Release

**Description**

When a Station does not initiate dialing on an outgoing CO line or receives a no answer on an intercom call, the System will disconnect the call based on the assigned Auto Release Timer (ADMIN program 180 – FLEX 14). If the User Station is in speaker phone or **[MON]** mode, the Station will return to idle, otherwise the station will receive an error tone if using the handset.

**Condition**

- Intercom call in H/F mode (refer to Ref. A) is considered answered and Station Auto Release will not be activated.
- When the Automatic Release time is assigned to 0, Auto Call Release is not activated.
- While making a call without lifting the handset and the Auto Release timer expires, the call will be canceled and the station will return to an idle state automatically.
- While making a call using the handset and the Auto Release timer expires, the call will be canceled and the station will receive an error tone.

**Reference**

**A.** Intercom Signal Mode: 2.4.14

**Admin Programming**

- Automatic CO Release Timer (PGM 180 – FLEX 14)
- Station Auto Release Timer (PGM 182 – FLEX 5)

## 2.5.4 Class Of Service (COS)

**Description**

Each station and CO line may be assigned to have different classes to allow or restrict call service. The level of COS assignments are programmed at each Station and CO line. Applied dialing restrictions are the result of the interaction of COS assignments as listed in the Class of Service Table.

**Class of service**

| | | CO Line COS | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| STATION COS | 1 | Unrestricted | Unrestricted | Unrestricted | Canned Restricted2 | Unrestricted |
| | 2 | Table A | Table A | Table B | Canned Restricted2 | Unrestricted |
| | 3 | Table B | Unrestricted | Unrestricted | Canned Restricted2 | Unrestricted |
| | 4 | Table A,B | Table A | Table B | Canned Restricted2 | Unrestricted |
| | 5 | Canned Restricted1 | Canned Restricted1 | Canned Restricted1 | Canned Restricted2 | Unrestricted |
| | 6 | Canned Restricted2 | Canned Restricted2 | Canned Restricted2 | Canned Restricted2 | Unrestricted |
| | 7 | Intercom Only | Intercom Only | Intercom Only | Intercom Only | Intercom Only |
| | 8 | Table C | Table C | Unrestricted | Canned Restricted2 | Unrestricted |
| | 9 | Table D | Table D | Unrestricted | Canned Restricted2 | Unrestricted |
| | 10 | Table C & D | Table C & D | Unrestricted | Canned Restricted2 | Unrestricted |
| | 11 | Table A, B, C & D | Table A, B, C & D | Unrestricted | Canned Restricted2 | Unrestricted |

Canned, Restricted1: Long distance call is not allowed.
Canned, Restricted2: Long distance call is not allowed (Maximum 8 digits can be dialed. '*', '0', '#' cannot be dialed).

**Station COS**

| | |
|---|---|
| **COS 1** | There is no restriction to dial. |
| **COS 2** | Monitored by Exception Table A |
| **COS 3** | Monitored by Exception Table B |
| **COS 4** | Monitored by Exception Table A & B |
| **COS 5** | Long distance call is not allowed; longer than 8 digits |
| **COS 6** | Long distance call is not allowed; max. 8 digits may be dialed |
| **COS 7** | Only intercom, paging and emergency calls are allowed; no dialing allowed on CO lines |
| **COS 8** | Monitored by Exception Table C |
| **COS 9** | Monitored by Exception Table C |
| **COS 10** | Monitored by Exception Table C & D |
| **COS 11** | Monitored by Exception Table A, B, C & D |

**CO COS**

| | |
|---|---|
| **COS 1** | There is no restriction. Monitored by STA COS. |
| **COS 2** | Monitored by Exception Table A & STA COS 2/4. |
| **COS 3** | Monitored by Exception Table B & STA COS 2/4 |
| **COS 4** | Long distance call is not allowed for all STA COS; max. 8 digits may be dialed |
| **COS 5** | Overrides STA COS 2,3,4,5,6, no COS restriction |

**CO to CO line COS**

| | |
|---|---|
| **COS 1** | There is no restriction to dial |
| **COS 2** | Monitored by Exception Table A |
| **COS 3** | Monitored by Exception Table B |
| **COS 4** | Monitored by Exception Table A & B |
| **COS 5** | Long distance call is not allowed; longer than 8 digits |
| **COS 6** | Long distance call is not allowed; only max. 8 digits may be dialed |
| **COS 7** | Only intercom, paging and emergency call are allowed; no dialing allowed on CO lines |
| **COS 8** | The assignments in the Exception Table C are monitored for allow and deny numbers |
| **COS 9** | The assignments in the Exception Table D are monitored for allow and deny numbers |
| **COS 10** | The assignments in the Exception Table C & D are monitored for allow and deny numbers |
| **COS 11** | The assignments in the Exception Table A, B, C & D are monitored for allow and deny numbers |

**PBX Dialing Codes**—There are 5 PBX access codes (2 digits) to enter the system and access a CO line via PBX. A CO line marked as a PBX line will not be governed by any station or CO line COS until a recognized PBX code is dialed.

**Exception Table A & B**—There are two exception tables with COS. Each table has 20 allow codes and 10 deny codes and a code may have eight entries.

## Condition

COS Rules

- In STA COS 7, no dialing is allowed to CO lines.
- In CO COS 5, STA COS 1-6 is ignored and there is no restriction to access to CO lines.
- In CO COS 4, STA COS 1~6 is ignored and long distance calls are not allowed; max. 8 digits may be dialed.
- In CO COS 1, it is restricted by STA COS.
- In CO COS 2 and STA COS 2/4, it is restricted by Exception Table A.
- There is no restriction in STA COS 1/3.
- In STA COS 5, long distance calls are not allowed; max. 8 digits can be dialed.

CO line Allow/Deny Restriction Rules

- If there are no entries, no restriction is provided by the table.
- If there are entries in the Deny table, then the restriction is on a Deny Only basis.
- If there are entries in the Allow table, then the restriction is on an Allow Only basis.
- If there are entries in both the Allow and Deny Tables, the Allow Table is searched, if the dialed number matches an entry in the Allow Table, the call is allowed. If a match is not found, the Deny Table is searched and if a match is found in the Deny Table the number is restricted. Otherwise, the number is allowed.

General Conditions

- If Incoming CO Call Toll Check is set, the COS rule is applied when the station dials digits after answering incoming CO calls.

## Admin Programming

- Station COS (PGM 116)
- CO line COS (PGM 141 – FLEX 2)
- CO-to-CO COS (PGM 166)
- Toll Exception Table (PGM 224)
- Canned Toll Tables (PGM 225)
- Incoming Toll Check (PGM 161 – FLEX 16)

## 2.5.5 System Speed Zone

**Description**
Up to 10 speed number zones can be defined. Speed bins & Stations can be allocated to these zones. Toll checks based on COS can be applied to zones (refer to Ref. A). Only Stations allocated to zones can access these bins. Speed bins not allocated to zones can be accessed by all Stations and no toll checks are applied.

**Reference**
**A.** COS: 2.5.4

**Admin Programming**
- Speed Dial Access (PGM 112 – FLEX 9)
- System Speed Zone (PGM 232)
- CO Dial Tone Detect (PGM 160 – FLEX 6)

## 2.5.6 Walking COS

**Description**
This feature allows temporarily override of the toll restriction and allows toll call from previously toll restricted phones. The authorization code (refer to Ref. A) can be used as a verified account code for SMDR (refer to Ref. B).

**Operation**
To activate Walking COS from a DKTU, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial **2 3**; the confirmation tone should be heard
3. Enter the authorization code; the intercom dial tone should be heard and the used extension COS (Ref. C) is temporarily changed.
4. A CO line call can be placed only one time.

To program **{Walking COS}** on a flexible button:

1. Press the **[TRANS/PGM]** button.
2. Press the applicable FLEX button.
3. Press the **[TRANS/PGM]** button.
4. Dial 2 3.
5. Press the **[HOLD/SAVE]** button to accept changes.

**Condition**
- Can be used on DKTUs and SLTs.
- Available on a per-use basis only. While activating walking COS, hanging-up or pressing the **[TRANS/PGM]** button to hold the call and seize another line, the original programmed Station COS will be used.
- When a wrong number is dialed, press the **[FLASH]** button to dial again without changing to an idle CO line.
- The fee for a call with Walking COS will be charged according to the Station authorization code, not the actual Station.
- When a User tries to use Walking COS at a station set to COS 7 with temporary COS, the call will follow the original COS of the Station.

**Reference**
**A.** Authorization: 2.5.2
**B.** SMDR: 2.12
**C.** COS: 2.5.4

**Admin Programming**
- Authorization Code Table (PGM 227)

# 2.6 Hunt Group

**Description**
Stations can be grouped so incoming calls may be routed to an idle station in the group. The number of Hunt groups and the number of Station in a Group are:

| Model | Hunt Group | Station in a Hunt Group |
|---|---|---|
| ipLDK-20 | 10 | 26 |
| ipLDK-100 | 15 | 32 |
| ipLDK-300 | 48 | 64 |
| ipLDK-300E | 48 | 64 |

Several VMIB announcements may be provided to each Hunt group. If a call is not answered when the 1st Announcement Timer expires, the second announcement will be provided if the call continues to wait. The second announcement may be repeated until the call is answered or disconnected by the User.

A Hunt Group may be assigned as one of the following 5 types:

| | |
|---|---|
| **Circular** | A call is routed to hunt group. If first destination is unavailable or unanswered, the call is routed to the next station in the group. |
| **Terminal** | If the call is unanswered or unavailable, it is directed to the next listed station in the group. The call will continue to be routed until reaching the last station in the group. |
| **UCD (Unified Call Distribution)** | Calls are routed to the station in the group that has been idle for the longest time. |
| **Ring** | All stations in the group will ring when a call is received. |
| **VM (Voice Mail)** | This group is assigned for Voice Mail and only the SLT assigned as the member of the VM group. |

## 2.6.1 Common Hunt Group Features

The Hunt Group features include:

**VMIB Announcement**—ipLDK system supports first and secondary VMIB announcements for the Hunt Group. When a call is received at the hunt group, the pre-assigned VMIB announcement will be played to the caller if the VMIB announcement is set and the timer expires. If the call is not answered when the second announcement timer expires, this announcement will be played. Also, the secondary announcement can be repeated as its programming (refer to Ref. A).

**Overflow Destination**—If the overflow timer expires and the call is unanswered, the call will be diverted to the overflow destination. The overflow destination can be an extension, a Group, VMIB announcement, or a system speed dial bin number.

**Wrap-up Timer**—When a member of the Hunt Group goes idle, ipLDK system will not distribute calls to that member. After the wrap-up timer expires, the member Station returns to a real idle state, and ready to receive CO calls.

**Music Source**—ipLDK system supports up to 8 kinds of music sources for Hunt Groups not including the ring back tone. When a call goes to queue, a caller will hear the pre-assigned music source. (refer to Ref. B)

**Multiple Member Assignment**—A station can be a member of one or more Hunt Groups of the same type.

**Hunt Group DND** - If Hunt group member have Hunt group DND button, Hunt group member can set Hunt call DND or not. This works toggle.

**Hunt Group Name** – If call is routed to Hunt group and hunt group name is programmed already, group name can be displayed at member's LCD.

### Condition

- If group member is forwarded to another, Group call can be received or not by hunt attribute – member forward option.
- Transferred calls to a Hunt group are not recalled.
- When a call is received in a Hunt Group, the call will be in the ring process before receiving the VMIB Announcement for the duration of the Hunt Group Announcement timer. If no Hunt Group announcement is assigned, the timer is ignored. If the timer is set to 0, the call will receive the announcement prior to the ring process.
- When a Hunt Group has guaranteed announcement (the 1st announcement timer is set to 0).
- Overflow timer is stated and ring is provided after the announcement finishes playing.
- Only the 1st announcement may be used for guaranteed announcement.
- If all stations in the Group are busy when a call is received, the call continues to wait for an available station in the Group. If queued, the call will be sent to MOH until the call is answered or disconnected.
- If there is no available member in a Group because every member sets DND, UCD DND, or call forward, all new calls to the Group and all queued calls in the Group are rerouted to another destination as programmed:
- Overflow destination if assigned.
- Alternative destination if the group is UCD group and it is assigned.
- If a call is not answered when the Overflow Timer expires, it will be sent to the overflow destination while the VMIB announcement is being played.
- If overflow destination is not assigned, the call will be dropped when overflow timer expires.
- If an Announcement Timer is set and no VMIB number is assigned, the announcement will be ignored.
- When the number of queued incoming calls are over the pre-defined amount in UCD group, incoming CO calls will be dropped.
- Pick-up Hunt Group is reserved for Intercom calls only.
- ISDN phones can be a member of a Hunt Group, but will only work when answering a hunt call.
- Group pick-up doesn't work with a call of Hunt Group pilot number; an error ton will be presented.
- ISDN phones can not be the first Hunt Group member; entering two numbers for one ISDN phone is not permitted.
- The Maximum hunt group name length is 12.
- In case of CO Hunt call, all 12 characters can be displayed. But In case of ICM Hunt call, only 8 characters can be displayed because of display format.

### Reference

**A.** Recording System VMIB Announcement: 2.11.1

**B.** ICM Box Music Selection: 2.13.10

### Admin Programming

■Hunt Group Assignment (PGM 190)

■Hunt Group Attribute (PGM 191)

## 2.6.2 Terminal Group

Calls to a station in the group or a pilot number will go to the first station in the group. If unanswered or unavailable, the call proceeds to the next listed station in the group. The call will continue to be rerouted until reaching the last station in the group where the call will remain or can be sent to an overflow station/group. A terminal Hunt group can be assigned with a pilot number (Hunt group number) and only calls to the pilot number will hunt.

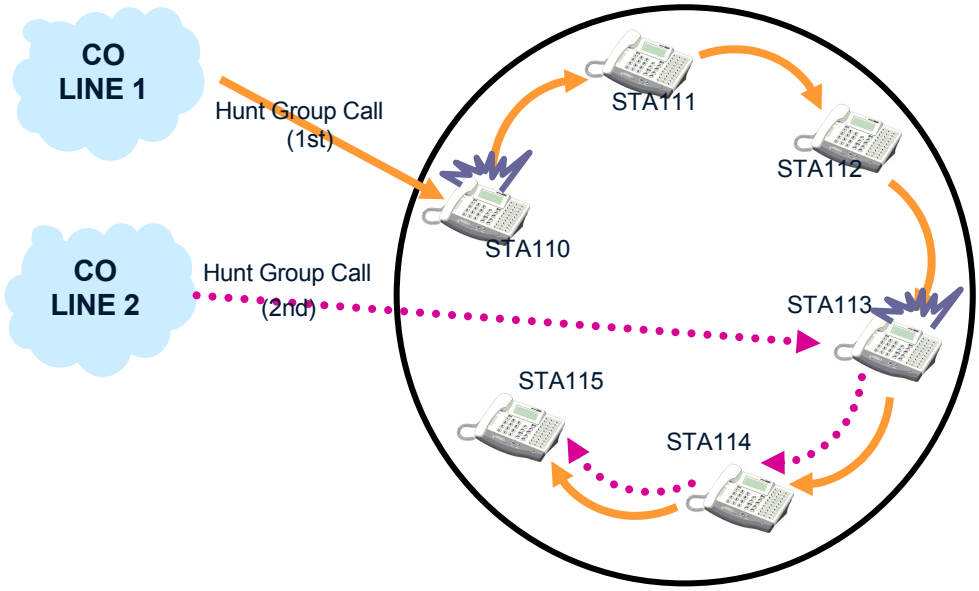



**Figure 2.6.2 Terminal Group**

## 2.6.3 Circular Group

In Circular Hunt, calls to a station in the group or a pilot number will go to the station or an idle station in the group. If unavailable or unanswered in the hunt no answer time, the call is directed to the next station in the group. The call will continue to route until each station in the group has been tried. The call will remain at the last station in the group or will be passed to the assigned overflow station or the assigned overflow group. A circular Hunt group can be assigned with a pilot number (Hunt group number) and only calls to the pilot number will hunt.

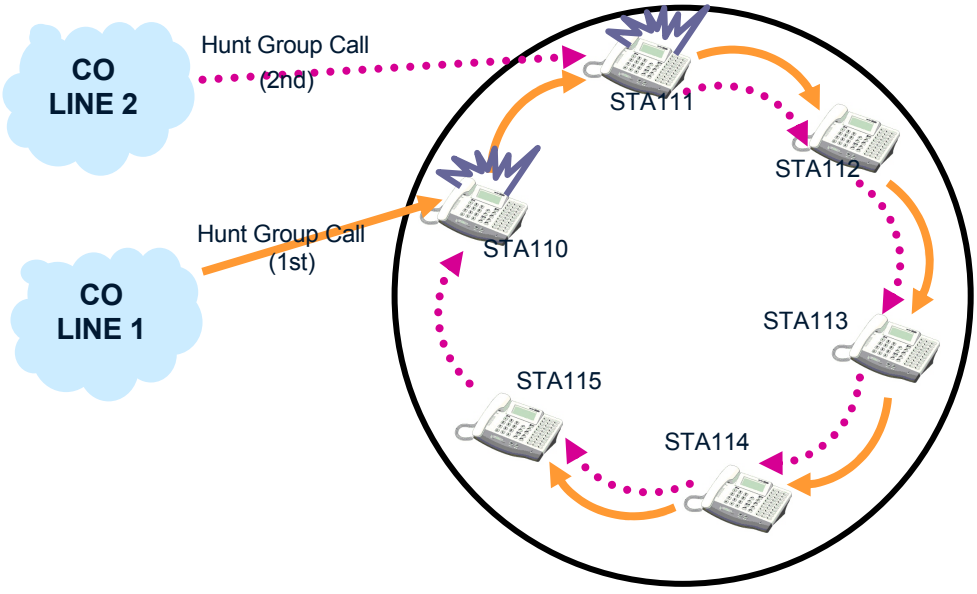



**Figure 2.6.3 Circular Group**

## 2.6.4 Ring Group

All the stations in the group receive ring simultaneously for a call of Hunt group until one of stations received ring answers the call. If call is not answered until overflow timer, it will be sent to an overflow destination, if assigned.

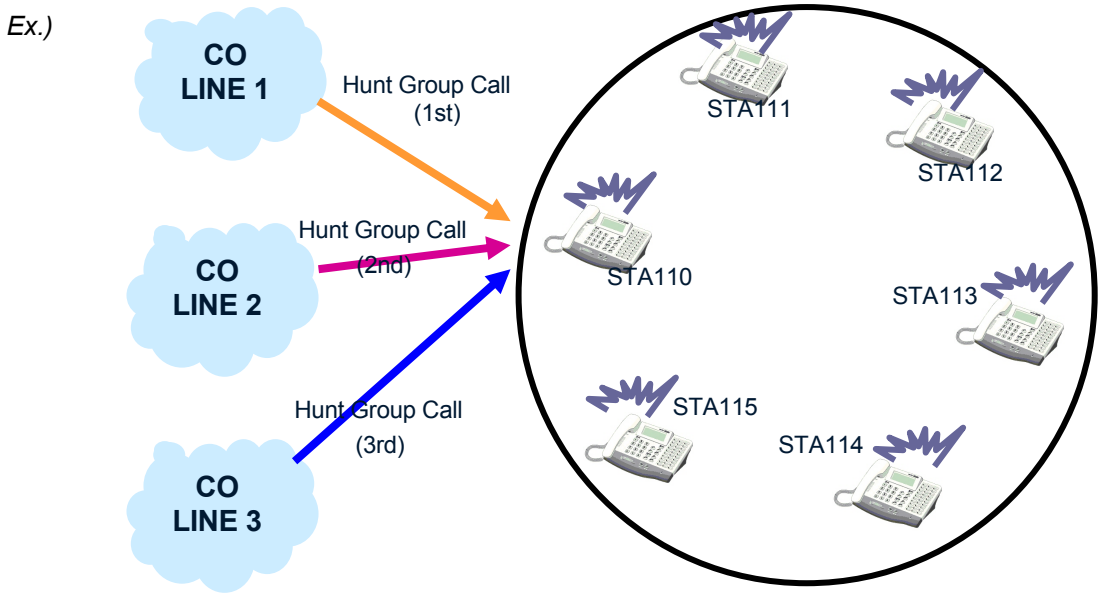



**Figure 2.6.3 Ring Group**

## 2.6.5 Voice Mail Group

This group is assigned for voice mail and only SLT Stations can be assigned as a member of the Hunt group. External voice mail equipment is connected to the system through the SLT port, and is assigned as a Voice Mail group. When calling a VM group, the system will use either Terminal or Circular Group type search to locate an idle member.

## 2.6.6 UCD Group (Unified Call Distribution)

Calls are sent to the group by dialing the pilot number (Hunt group Number) or assigning CO lines to directly terminate to the group. Calls are directed to the station in the group that has been idle for the longest time. If all stations in the group are busy when a call is received for the group, the call may be routed to an alternate location, or may continue to wait (queue) for an available station in the group. Based on programming, the queued call may be taken out of the group and directed to an overflow station.

The member of UCD group can assign DND. A station on UCD-DND will not receive calls.

*Ex.)*

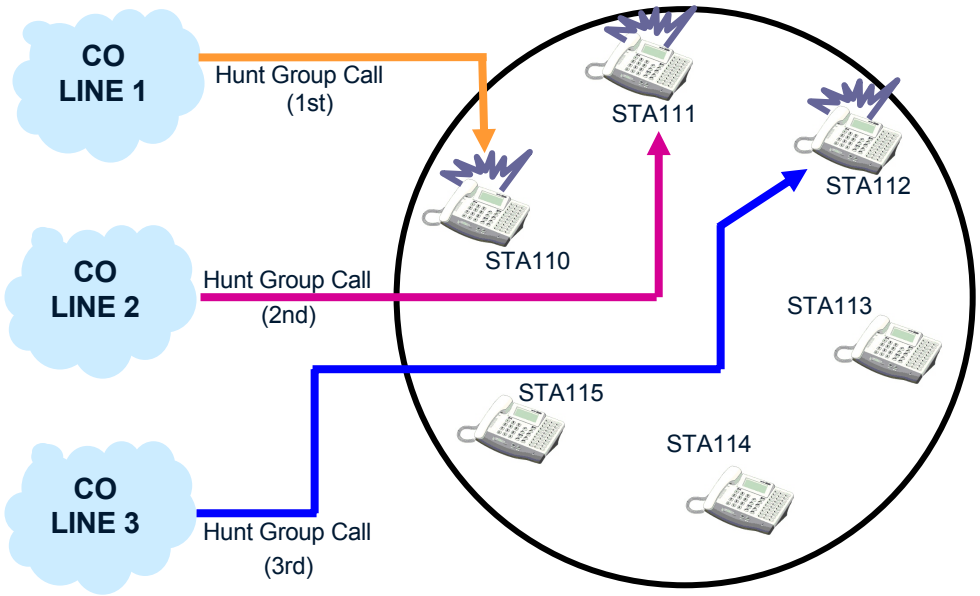



**Figure 2.6.4 UCD Group**

**Operation**

To assign UCD-DND button:

1. Press **[TRANS/PGM].**
2. Press FLEX button.
3. Press **[TRANS/PGM].**
4. Dial 8 7.
5. Enter the Hunt Group Number.
6. Press the **[HOLD/SAVE]** button to save changes.

***NOTE:*** *Do not make a loop with UCD group alternative destination.*

**Condition**

- The ipLDK system supports VMIB announcements for hunt groups. When a call is received at the secondary VMIB announcement, the caller can be connected another station by the entered number with CCR service. (PGM 228)

## 2.6.7 ACD (Automatic Call Distribution)

**Description**

A separate supervisor or common supervisor can be assigned in UCD group. And, the supervisor can monitor the status of the group. When a call is queued to a group for longer than a predefined time or when a predefined number of calls are queued, the supervisor's LCD will indicate the number of calls in queue, and the queued time for the longest queue. The supervisor can change overflow destination and timing. The system will provide traffic (see Ref.1) and on line status reports, based on the supervisor's request for the UCD group including the following group statistics:

- Total calls
- Number of unanswered calls
- Average and the longest queued calls
- Number and total time when all agents are busy
- Average ringing time before answer
- Average service time after answer

ACD Supervisor can activate two-way recording when monitoring agent's conversation.

Queue Information of Queuing Call count is automatically displayed at Supervisor LCD as well as Agent LCD.

**Operation**

**VMIB Announcement**

The VMIB announcements can be assigned to provide different messages to each UCD groups. The system UCD groups can be programmed to provide announcements to incoming calls to a group where all stations are busy. Both primary and secondary announcements will be available and a guaranteed announcement may be assigned.

**Agents**

The following features are available to Agents in a UCD group:

Agent Login/Logout - It is assigned by the Admin Program. A UCD agent can contain more than one UCD group.

Agent On/Off Duty - Agent can be On/Off duty by dialing the UCD DND Code (**[Trans]** + 87 + Hunt No) on the dial pad, press the pre-programmed flexible button.

**Alternate UCD Group**

An alternate UCD group can be programmed so that if stations are busy, the alternate will be checked for an available station.

**Overflow Station Assignment**

An overflow station may be assigned to route callers in queue to a designated station after a specified time. The overflow station may not be one of the UCD group stations. The overflow station can be forwarded if enabled in the Admin program.

**Mute Ring Service**

If 191 – F22 option is set to ON, Mute ring is served to UCD first Member, when the call is queued.
The mute ring is given only one time in 0.4 second.

**Display Queued Calls**

LCD Display Queued call count.

| |
|---|
| QUE Group NO(Queue count) |

**LED Indication:**
The DSS LED of the **{ACD Group}** will flash as the number of queued calls.

0 : Off, 01-3 : 60 IPM, 4-6 : 120 IPM, more than 7 : 240 IPM

**Supervisor**
Supervisor Login/Logout - It is assigned by the Admin Program. Each UCD group can be assigned a separate supervisor.

Supervisor Monitor – The supervisor monitor provides a means for an UCD Supervisor to monitor an agent's call in progress or to provide assistance. When used, a Supervisor may intrude onto an agent's call to listen only or to use the conference mode; this feature is available with or without warning tone.

Reroute Queued Call – The supervisor can reroute a queued call to another destination with or without answer.

Database Assignment – The supervisor can change the overflow destination, overflow time and wrap-up time.

DKT with flexible buttons must be programmed **[Supervisor Status]** button.
**[TRANS/PGM]** + **[FLEX]** + [**TRANS/PGM]** + 8* +Group NO + **[HOLD/SAVE]**

**ACD Statistics Report**
1. Press the **[Supervisor Status]** button.
2. The Status & Control Menu is shown as below:

| |
|---|
| [1] ACD STATUS |
| [2] ACD DATABASE |
| [3] ACD DUTY |
| [#] ACD PRINT |

ACD call queue status display:

1. Dial "1" for ACD call statistics.

- ACD Group -

Total Calls

Average Call Time

Average Ring Time

Busy Count and Time

Number of calls in queue,

Average and Longest Queued Time

Unanswered Call Count

Access to the ACD Routing Database:

1. Dial"2" for ACD Database Code.
2. Select database item, scrolling with the **[VOL UP]/[VOL DWN]** button.
   Overflow Destination- station/group
   Overflow Time- xxx seconds
   Wrap-Up Time- xxx seconds
3. Enter new data.
4. Press the **[SAVE]** button.

Agent Status and Control:

1. Dial “3” for Agent Status.

```
[1] DUTY STATUS
[2] DUTY ON/OFF
[3] DUTY PRINT
```

To view Agent Status:

1. Dial Agent Status Code “3 + 1(duty status)”.

```
AGENT XXXX
TOTAL CALLS
AVE CALL TIME
AVE RING TIME
UNANSWERED CALLS
```

2. Press the ‘*’ key or ‘#’ key for a next agent selection.
3. Press **[VOL UP]** or **[VOL DOWN]** key for:
   - Number of ACD calls served
   - Number of unanswered ACD Calls
   - Average ring time before answer
   - Average ACD call service time after answer.

To control Agent duty status:

1. Dial ACD Agent Duty feature Code “3 + 2(duty on/off)”,
2. Press the ‘*’ key for agent selection,
3. Dial 0 or 1, (0: Off Duty, 1: On Duty).

To output Agent Statistics Report:

1. Dial ACD Statistics Reporting Code ”3 + #(duty print)”,
2. Press the ‘*’ key or ‘#’ key for a next agent selection.
3. Press the **[MUTE]** button to initialize the database; this eliminates overlap of future reports.
4. Below information is example of Each Agent Statistics.

```
=================================================================
 ACD GROUP INFORMATION (*620)            Date: 05/15/02 Time: 05:42:24
 AGENT_NO | TOTAL_CALL | UNANSWERED_CALL | AVE_RING_TIME | AVE_SVC_TIME
 =================================================================
            1001 |            0 |                  0 |      00Min 00Sec |     00Min 00Sec
 =================================================================
```

If PGM 161 – F9 ACD PRINT ENABLE is ON, ON Demand print format is not used.
Only Periodic format can be printed as below.

~ 1 = 2 = 3 = 4 = 5 cr lf

| Field(s) | Description |
|---|---|
| ~(tilt) | Means start of ACD statistics and is always located at first column |
| =(equal) | Delimiter between each meaningful data |
| 1 | Each Agent number |
| 2 | Total call counter |
| 3 | Unanswered call counter |
| 4 | Average ringing time (ex., 96=1 min 36 sec) |
| 5 | Average service time (ex., 96=1 min 36 sec) |
| lf | Line Feed (0x0A) |
| cr | Carriage Return (0x0D) |

To print ACD Statistics:

1. Press a programmed **{ACD Status}** button:
2. 1(Status)/2(Dbase)/3(Duty)/#(Print)).
3. Dial ACD Statistics Reporting Code "#".
4. In the reporting status (1), the supervisor can initialize all stored reporting database by pressing **[MUTE]** button before hang-up. When press **{ACD}** button in any sub state, station goes to (2) state.

The following information is example of Group Statistics.

====== ACD GROUP INFORMATION (*620 GRP) ======
Date: 05/15/02 Time: 05:40:07
- Total Calls: 2
- Unanswered Calls: 2
- All STA Busy Count: 2
- Average Ringing Time: 00Min 00Sec
- Average Service Time: 00Min 00Sec
- All STA Busy Time: 01Min 17Sec
- Calls in Queue, Now: 0

**Periodic Print ACD Statistics**

The ACD Statistics format is used PGM 161 – F9 ACD PRINT ENABLE is ON.
If this option is ON, ON Demand print format is not used; only Periodic format can be printed.

~ 1 = 2 = 3 = 4 = 5 = 6 = 7 = 8 = 9 = 0 cr lf

| Field(s) | DESCRIPTION |
|---|---|
| ~(tilt) | Means start of ACD statistics and is always located at first column |
| =(equal) | Delimiter between each meaningful data |
| 1 | ACD Group number |
| 2 | Total call counter |
| 3 | Unanswered call counter |
| 4 | All busy counter |
| 5 | Average ringing time (ex., 96=1 min 36 sec) |
| 6 | Average call service time (ex., 25=0 min 25 sec) |
| 7 | Total busy time (ex., 64=1 min 04 sec) |
| 8 | Number of current queued calls |
| 9 | Longest queued time |
| 0 | Average queued time |
| lf | Line Feed (0x0A) |
| cr | Carriage Return (0x0D) |

To go to the Main Menu:

1. Press **[HOLD/SAVE]** button, then go first step as below

[1] ACD STATUS
[2] ACD DATABASE
[3] ACD DUTY
[#] ACD PRINT

To re-route queued calls with answer:

1. Assign a flexible button as **{ACD Group}** button.
2. During the flashing the DSS LED of the **{ACD Group}** button, press the **{ACD Group}** button.
3. The first queued incoming CO call is answered by supervisor.
4. If the Supervisor lifts handset, the preferred line will be answered.
5. The following operation follows the normal operation for the DSS button feature assigned to "station group".

To re-route queued calls without answering:

1. Assign a flexible button as **{ACD Group}** button; the DSS LED of the **{ACD Group}** button will flash when there are queued calls.
2. A supervisor presses 'No answer reroute code' **564** and destination station number or **{DSS}** in order to reroute first queued call.

To monitor an Agent's conversation at ACD supervisor:

1. Call the busy agent and receive the busy tone.
2. Press the {ACD} flexible button.
3. The Supervisor can monitor the agent, but will not send audio to the agent.

To Record an agent's conversation at ACD supervisor:

1. Call the busy agent and receive the busy tone.
2. Press **{ACD}** flexible button.
3. The Supervisor can monitor the agent, but will not send audio to the agent.
4. Supervisor the presses the **[Two Way Recording]** button.
5. When two-way recording is stopped, recorded VMIB message is left at the Supervisor station.

To activate UCD-DND manually:

1. Assign **{UCD-DND}** with UCD-DND feature code **[Trans] + 87 +Group NO** on station
2. A UCD member user presses **{UCD-DND}** button in order to go UCD-DND mode..
3. A **{UCD-DND}** button turns steady on and that station goes UCD-DND mode.

To deactivate UCD-DND:

1. If a UCD member goes into UCD-DND mode, a **{UCD-DND}** button illuminates steady on.
2. A UCD member presses **{UCD-DND}** button.

### Condition

- The supervisor should assign a flexible button for **{ACD}**.
- **[TRANS/PGM]** + Flex. BTN + **[TRANS/PGM]** + 8 ∗ + ACD Group No + **[HOLD/SAVE]**
- The user can see the group status by ACD supervisor or by printing periodically to RS-232C print.
- To print ACD statistics periodically, set the ACD Print Enable (PGM 161-F9) and the ACD Print Timer (PGM 161-FLEX 10: 10sec base).
- The statistic information of Each Agent can be viewed and printed at the supervisor.
- The agent can login and logout using Hot Desk feature.
- If ACD Print Enable (PGM 161–F9)' is set to ON, only periodical statistic is printed.
- To print ACD Statistics on Demand and Agent Statistics on Demand ACD Print Enable (PGM 161-F9) is set to OFF.
- A guaranteed announcement is obtained by assigning 0 seconds to the first announcement.

### Reference

**A.** Traffic Analysis: 2.18

### Admin Programming

- Hunt Group Assignment (PGM 190)
- Hunt Group Attribute (PGM 191)
- ACD Print Enable (PGM 161 – FLEX 9)
- ACD Print Timer (PGM 161 – FLEX 10)
- ACD Clear Database after Print (PGM 161 – FLEX 11)

# 2.7 Conference

**Description**

A station user (Supervisor) can make a call with intercom stations and CO Lines. Supervisor invites station user or CO Line user one by one with **[CONF]** button. Connected users can speak and hear with each other at the same time.

In Multi-Line conference, up to 15 (3 in ipLDK-20) Parities (intercom/CO Line) can enter a conference. Up to 14 (2 in ipLDK_20) CO lines can have a conference with one intercom station.

Unsupervised Conference is that leaved members are still preserve conference status, though the conference initiator (supervisor) may exit a conference.

| Conference Type | Description |
|---|---|
| Conference | A station user can make a call with internal STA and CO lines. |
| Multi Line Conference | One internal party can make conference with max. 14 (2 in ipLDK-20) CO lines. |
| Unsupervised Conference | In unsupervised conference, it is restricted to Unsupervised Conference timer if there is no internal station in the conference. (Default: 10min) |
| Paging Conference | It is possible for the second originator to page with the first originator during the paging announcement. |

**[Add On Conference]** **[Multi Line Conference]**

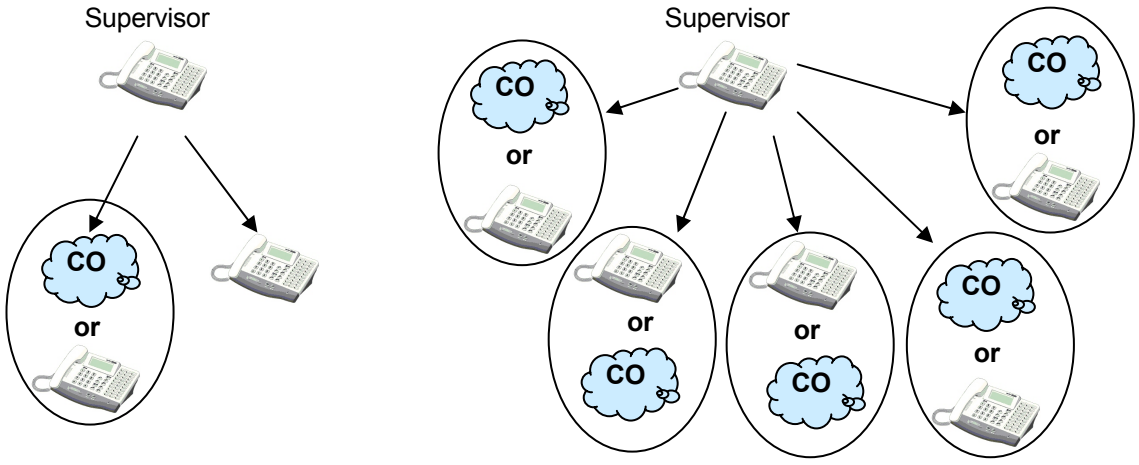



**Figure 2.7.1 Add On and Multi-Line Conference**

**Operation**

To establish an Add-on Conference, perform the following Steps:

1. While on a call, press the **[CONF]** button; the existing call will be put on HOLD and the intercom dial tone will be heard.
2. Dial the digits to connect the second internal party.
3. When the call is answered, press the **[CONF]** button.
4. When all parties have been called, press the **[CONF]** button again; all parties will be connected to the call.

To make a Multi-line Conference, perform the following Steps:

1. While on a CO line call, press the **[CONF]** button; the existing call will be put on HOLD and the intercom dial tone will be heard.
2. Dial the digits to connect the second party.
3. When the call is answered, press the **[CONF]** button.
4. When all parties have been called, press the **[CONF]** button again; all parties will be connected to the call.

To make Unsupervised Conference:

1. During a conference, press the **[CONF]** button in supervisor.
2. The conference is still connected and the supervisor **[CONF]** button LED should flash.
3. To re-enter the conference, lift the handset and press the flashing **[CONF]** button on the supervisor Station.

**Condition**

- In unsupervised conference, it is restricted to Unsupervised Conference timer if there is no internal station in the conference (Default: 10min.).
- The Unsupervised Conference timer will be reset if the internal party re-enters the conference.
- Up to 15( 3 in ipLDK-20) parties (internal/external) can enter a conference in ipLDK system.
- In Multi-line conference, up to 14 (2 in ipLDK-20) CO lines can be on a conference with one internal party.
- If the supervisor in a conference receives error or busy tone from the internal party while making a conference, he can receive intercom dial tone again by pressing the **[CONF]** button.

**Admin Programming**

- Unsupervised Conference Timer (PGM 182 – FLEX 6)
- Multi-line Conference (PGM 160 – FLEX 9)

## 2.7.1 Conference – SLT (Brokers Call)

**Description**

A single line telephone user can initiate a 3-way conference with any combination of CO line or internal users.

A single line telephone user can alternate between two calls maintaining private conversations with both parties. The parties may be either internal (stations connected to the system) or external CO line calls, and may be incoming or outgoing.

**Operation**

To set up a conference from a SLT, perform the following Steps:

1. Make the first call.
2. Hook switch and the intercom dial tone will be heard; the existing call is placed on exclusive hold and the recall timer is activated.
3. Place the second call and announce the conference.
4. Hook switch and connect to the first call; within 2 seconds, hook switch again to establish a conference.

## 2.7.2 Paging Conference

**Description**
During a page by conference page zone, the second originator can page along with the first originator.

**Operation**
When a Conference Page is being activated:

Keyset User

1. Lift handset and press **[CONF]** button.

SLT User

1. Lift the handset to answer the page.
2. Hook-flash and dial **58** (conference page join code).

**Condition**
- Page Timer is not applied to Paging Conference Group.
- If there is the second page originator, it is impossible to "Meet Me Page."
- If the first originator goes on-hook, the conference group paging connection is released.
- The second originator can make paging regardless of page access privilege.

**Admin Programming**
- Paging Warning Tone (PGM 161 – FLEX 4)
- Paging Access (PGM 111 – FLEX 8)
- Conference Page Zone (PGM 119)
- Refer to **ipLDK Installation Manual**, SLT Conference Page Join Code (PGM109-FLEX 5)

## 2.7.3 Conference Room

**Description**
This feature allows internal users or CO callers to join a conference without being invited by the conference supervisor. This conference feature has the conference join codes, and each conference room has an own join code (room number). A DID/DISA and transferred CO call can be a member of conference. This feature terminates when the deactivation code is dialed or Forced Delete PGM code by Attendant.

When a user enters a conference room, previous entered member can hear warning tone. This warning tone will be presented to All members included as CO Conference Room Members. When a user exits a conference room, other room members will hear a warning tone also.

Entering Tone is same as Conference feature tone, and Leaving Tone is another.

Leaving beep tone is provided to each Station and CO.

If this tone feels unpleasant, PGM 160 – F11 **[CONF WARN TONE]** option can be made OFF.

Each Conference Room can be assigned to a DSS button; each Conference Room button will flash or illuminate steady according to the number of conference room members (LED flashing is enabled for All Stations as well as the ATD Station).

**Operation**

To activate the conference room feature, perform the following Steps:

1. Press the **[TRANS/PGM]**.
2. Dial **4** + **3**.
3. Dial the Conference Room Number (1-9).
4. Dial 5-digit password (optional).
5. Press the **[HOLD/SAVE]** button to save changes.

To deactivate a conference room:

1. Press the **[TRANS/PGM]**.
2. Dial **4** + **4**.
3. Dial Conference Room Number (1-9).
4. Press the **[HOLD/SAVE]** button.

To join a conference room in case of an internal call:

1. Dial the activated conference room number. (571 - 579).
2. Enter 5 digits password for entering conference room (optional).

To join a conference room in case of DID/DISA call (in using of DID type 2, DID destination is assigned conference room):

1. DID/DISA call is routed to conference room.

To Transfer a CO Call to conference room:

1. Press the **[TRANS/PGM]** button at attendant.
2. Dial the activated *Conference Room Number* (571 - 579).
3. Dial the password for entering the conference room (optional).

To check Conference Room status from the Attendant Station:

1. At the Attendant Station, dial a conference room status code **[TRANS/PGM].**
2. Dial **0** + **4** + **7**.
3. Enter conference room number (1-9) to monitor.
4. The Attendant LCD will show the number of members joining the conference room.

To delete Conference Room forcedly by Attendant:

1. Dial a conference room forced delete code, **[TRANS/PGM] + 048.**
2. Enter the Room number and press **[HOLD].**
3. When erasing Conference room at ATD station, password is not needed.

**Condition**

- The Maximum number of conference rooms is 9.
- Up to Maximum 15 ( 3 in ipLDK-20) members can enter each room (same present conference feature).
- Assigning and entering a password is Optional.
- CONF ROOM status can be checked by ATD (how many members are joining the conference room).
- For CO party, only ISDN line can enter a conference room.
- If system attendant has a conference room button, she can check the status of conference room with LED.
  - ON—Conference room is activated, but there is no member.
  - OFF—The conference room is deactivated.
  - Flash 60 IPM—The number of members are 1 to 3.
  - Flash 120 IPM – The number of members are 4 to 6.
  - Flash 240 IPM – The number of members are more than 7.
- In case of Analog Line which is set to a valid “Open Loop timer” (PGM142-FLEX13), a DISA and transferred CO call can be a member of conference
- PGM 160 – FLEX11 option is used as Conference feature. Entering and Leaving tone are controlled by PGM 160 – FLEX11.

**Admin Programming**

- PGM 160 – FLEX11: Conference Warning Tone

# 2.8 Paging feature

## 2.8.1 Internal, External, All-Call, and Meet-Me Page

**Description**

Stations can individually be allowed or denied the ability to make pages. This applies to all internal zone paging and all external zone paging. A station denied access to paging may still answer a Meet-Me Page announcement.

There is one External Paging Zone available. External paging requires an externally provided amplifier and paging system. External page can have a relay contact associated to it.

There are ten internal paging zones available. A station can be in any or all zones or in no zone at all. Stations not assigned to a page group can still make page announcements, if allowed in station programming. Stations can be assigned to a page group in order to receive pages but not allowed to make page announcements.

Stations to receive pages for a given zone are assigned to the zone. A page warning tone, if assigned, will be provided to the page zone(s) prior to the audio connection. The user is allowed to continue the page for a specified period. After the time is expired, the user is disconnected and the page zone(s) is returned to idle.

A user can respond to a page from any station and connect to the paging party for a private conversation. The user should respond to the page in the Page Time-out duration to connect the paging party.

**Paging Codes**

| ipLDK-20 | ipLDK-100 | ipLDK-300/300E | ITEM |
|---|---|---|---|
| 501-510 | 501-515 | 501-535 | Internal Page Zone |
| 543 | 543 | 543 | Internal All Call Page |
| 544 | 544 | 544 | Meet Me Page |
| 545 | 545 | 545 | External Page Zone 1 |
| | 546 | 546 | External Page Zone 2 |
| | 547 | 547 | External Page Zone 3 |
| | 548 | 548 | External Page Zone 4 |
| 549 | 549 | 549 | All Call Page (Internal & External) |

**Operation**

To initialize a page, perform the following:

1. Lift the handset or press the **[MON]** button.
2. Dial the desired paging code.
3. If assigned, after the page warning tone is presented, make the desired announcement.
4. Replace the handset and go on-hook.

To assign Meet-me Page at a FLEX button:

1. Press the **[TRANS/PGM]** button.
2. Press the desired FLEX button.
3. Dial 5 4 4.
4. Press the **[HOLD/SAVE]** button to accept changes.

To respond to a Meet-me Page:

1. Lift the handset or press the **[MON]** button.
2. Dial 5 4 4 (Meet-me Page code),
   OR
3. Press the **[HOLD/SAVE]** button (in case of WIT-300HE, dial Meet-me Page code and press **[Send]** button).
4. The call with the paging party is established and the zone returns to idle.

**Condition**

- When external paging is required, appropriate external equipment should be attached to the proper external page connections on the MBU.
- A station which is in DND or busy, it cannot receive a page.
- A station which is not allowed to page cannot make a page.
- When a paging is used in the system, another paging is not allowed.
- Page warning tone may be controlled by Admin. Programming.
- When the page timer is expired, paging connection is automatically released and ICM busy tone is presented to the paging station.
- You should lift the handset to make a page. When trying to make a page without lifting handset, "LIFT HANDSET TO PAGE" is displayed on the LCD.
- Paging can be programmed to a Flex. button.
- If an intercom call is received to the paging station, the caller will hear intercom busy tone.
- If a CO line call is received to the paging station, the station will receive off-hook ring.
- A station may respond meet me page regardless of assignment of pick-up/paging group assignment/page access.
- Page from CO line can't be answered by pressing the **[HOLD/SAVE]** button or the code of meet-me answer. If a user tries to answer a meet me page request from CO line, error tone is heard and LCD message for error will be displayed.

**Admin Programming**

- Paging Timeout Timer (PGM 181 – FLEX 10)
- Page Warning Tone (PGM 161 – FLEX 4)
- Page Access (PGM 111 – FLEX 8)
- Internal Page Zone (PGM 118)
- External Control Contact (PGM 168)

## 2.8.2 Pre-recorded MSG

**Description**

User can record a VMIB message for paging.

**Operation**

To record a VMIB paging message, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 6 5.
3. The announcement "Press # button to record" should be heard. If there is already a recorded message in the number dialed, the recorded message will be played.
4. Press the # key to start recording.
5. After hearing the announcement "Record your message" and the confirmation tone, record the desired message.
6. Press the **[HOLD/SAVE]** button,
   OR
7. Press the **[MON]** button when finished recording; the confirmation tone will be heard.
8. Press the **[SPEED]** button while the recorded message is playing to deleted the message; a confirmation tone is heard.

To activate a VMIB message for paging:

1. Dial the page code (5xx) and lift handset.
2. The recorded VMIB message is paged.

To delete a VMIB message for paging:

1. Press the **[TRANS/PGM]** button.
2. Dial 6 7.
3. Then the recorded message is deleted,
   OR
4. Press the **[SPEED]** button while playing, then the message is deleted and confirmation tone is heard.

**Condition**

- Lift handset to make a page.
- If there is any recorded message, it is paged and if there is no recorded message, user's voice is paged.

**Admin Programming**

- Paging Timeout Timer (PGM 181 – FLEX 10)

## 2.8.3 SOS Paging

**Description**

The system allows of being recorded multiple VMIB messages for pre-recorded paging. Depending on circumstance, user can use pre-recorded messages for paging. Recorded VMIB message is paged to a page zone at emergency.

**Operation**

To assign **{VMIB SOS Paging}** at a flexible button, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Press the FLEX button to assign.
3. Dial paging code (5xx).
4. Dial Message number (001-070).
5. Press the **[HOLD/SAVE]** button.

To activate VMIB SOS paging:

1. Press the assigned **{VMIB SOS Paging}** flexible button.

**Condition**

- This feature can be only activated by pressing assigned flexible button on a DKTU in idle state.
- The VMIB message for SOS Paging can be recorded only at attendant station.
- Paging zone includes internal, external and all call paging area.
- VMIB SOS paging is not restricted by VMIB Paging timer. The whole VMIB SOS paging can be paged even though Paging Timeout timer expires.

## 2.8.4 Push-to-Talk (PTT)

**Description**
In WIT-300HE, using the PTT button, the user can talk to members of an internal page zone.

**Operation**
Registration of internal page zone for PTT:

1. Press **[TRANS/PGM]**.
2. Press '1#'.
3. Input the internal page zone for PTT. If you want to remove the assigned page zone, Input '0'.
4. Press the **[HOLD/SAVE]**.

Usage of PTT:

1. Press the PTT button of WIT-300HE; the user can talk to members of internal page zone assigned.
2. If PTT button is released, paging will be ended.

**Condition**

- PTT follows the feature of internal call page except the Page Timer.
- The Page Timer isn't applied.
- The range of internal page zone for PTT follows internal page zone of each system except conference page zone.

# 2.9 Linked Stations

## 2.9.1 Executive/Secretary

**Description**

Stations in the system can be assigned as Executive and Secretary pairs. When an Executive station is busy or in the DND state (refer to Ref. A), intercom calls and transfer calls are automatically routed to the designated secretary.

Secretary can activate and deactivate the DND of EXEC station from her extension.

At secretary station, EXEC DND button is made by pressing **[PGM]** + flex button + **[PGM]** + 55 + EXEC station number.

Figure 2.9.1 describes that there is CO call to executive station in Executive/Secretary pairs,

- If executive station is idle, executive station will receive the call.
- If executive station is busy or in DND, designated secretary station will receive call.

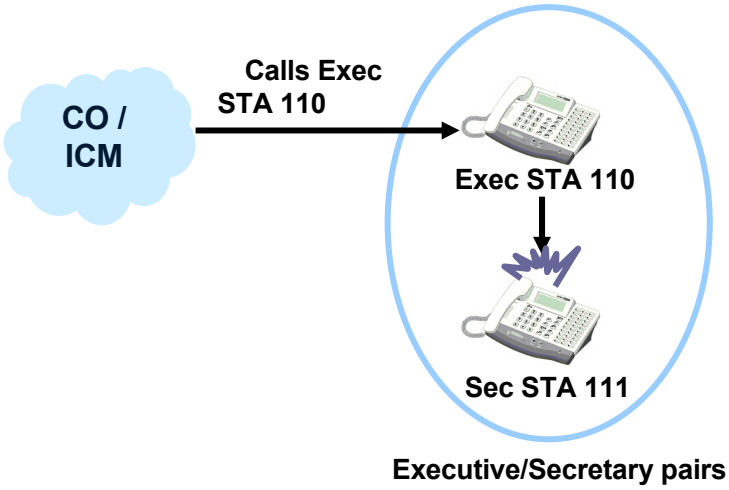



**Figure 2.9.1 Ringing in Executive/Secretary pairs**

**Operation**

To activate unconditional Executive/Secretary Transfer:

1. To transfer every calls to a Secretary unconditionally, press the **[DND/FOR]** button from the Executive's DKTU.
2. In Korea or Israel or India, every ICM call to an Executive is forwarded to his Secretary automatically even if the Executive is in idle state.
3. If 'CO Call To SEC' feature is set to ON, CO incoming call is automatically forwarded to Secretary.
4. If 'Call EXEC If SEC DND' feature is set to ON and the secretary is in DND state(see Ref.1), incoming call is not forwarded(see Ref.4) to Secretary.
5. In Korea or Israel or India, only the other Executive of equal or higher grade can make an ICM call directly to the idle Executive.

### Condition

- Secretary can pass a call to Executive when in DND state (refer to Ref. A), using the camp-on feature (refer to Ref. B).
- One Executive can have multiple Secretaries within maximum pairs, and one secretary can be assigned to multiple executives within maximum pairs.
- When the executive is in DND, the Secretary can transfer a CO line call or make camp-on (refer to Ref. C).
- It is possible to make a chain to assign Executive/Secretary pairs. It means that a Secretary may be an Executive of another Executive/Secretary pair. If an Executive and the Secretary which has its own Secretary are busy, a call will be forwarded to the second Secretary of the Executive/Secretary chain (it cannot be a loop chain).
- If an Executive has multiple secretaries and the first Secretary is busy, a call will be forwarded to the next Secretary.
- If an Executive has multiple secretaries, a Secretary can forward a call to another Secretary, but cannot forward a call to Executive.
- If an Executive makes a call forward to non-secretary station, a call to Executive will be routed to assigned station (refer to Ref. D).
- When both Executive and Secretary are busy, camp-on / transferred calls / messages are remained at the last Secretary station in the chain.
- In Korea, India, or Israel, every ICM call to an Executive is automatically forwarded to the Secretary; even if the Executive Station is in an idle state (only Executives of equal or higher level can make a direct ICM call to an idle Executive Station).
- If CO Call to SEC feature is set to ON, incoming CO calls automatically are forwarded to the Secretary.
- If the Call Secretary DND feature is set to ON, and the secretary is in the DND state (refer to Ref. A), incoming calls are not forwarded (refer to Ref. D) to the Secretary even if the Executive is in idle state (Korea, India, and Israel only).
- In SEC station, to control the EXEC DND, SEC station type must be DKT.
- To check EXEC DND at SEC station, SEC station must be only idle state.

### Reference

**A.** DND: 2.4.9

**B.** Camp-On: 2.4.5

**C.** Call Transfer: 2.3.2

**D.** Call Forward: 2.3.1

### Admin Programming

- Do Not Disturb (PGM 111 – FLEX 3)
- Executive/Secretary Table (PGM 229)
- CO Call To SEC (PGM 229 – FLEX2)
- Call EXEC If SEC DND (PGM 229 – FLEX3)
- EXEC Grade (PGM 229 – FLEX4)

## 2.9.2 Linked-Pair Station

**Description**

Two stations can be linked with each other by programming. Linking with a DKTU and another station, the user can use them alternatively. When two stations are linked, the following functions are supported.

Figure 2.9.2A describes that if two linked stations in Linked-Pair are idle and a CO call arrives, two linked stations ring. But the figure 2.9.2B describes that if one linked station in Linked-Pair is busy and a new CO call arrives, the caller will hear the busy tone.

*Ex.)*

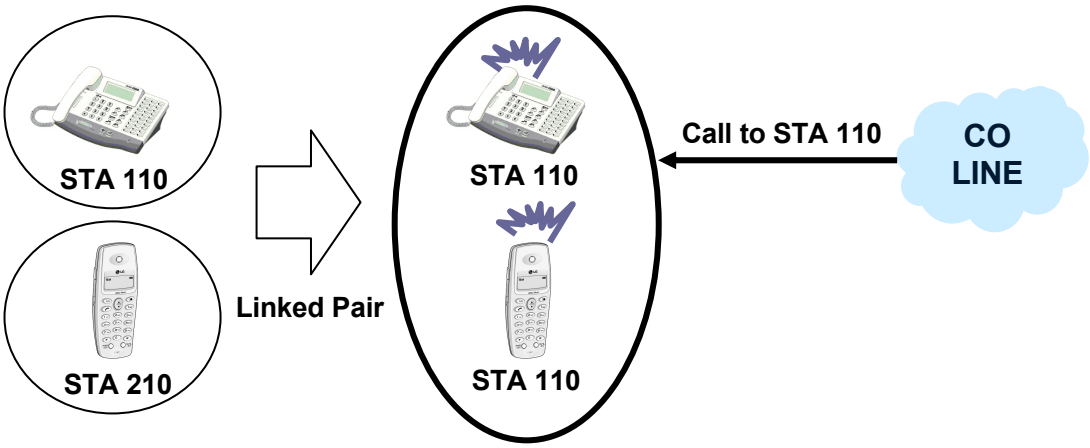



**Figure 2.9.2a Ringing in Linked Pair (two IDLE linked stations)**

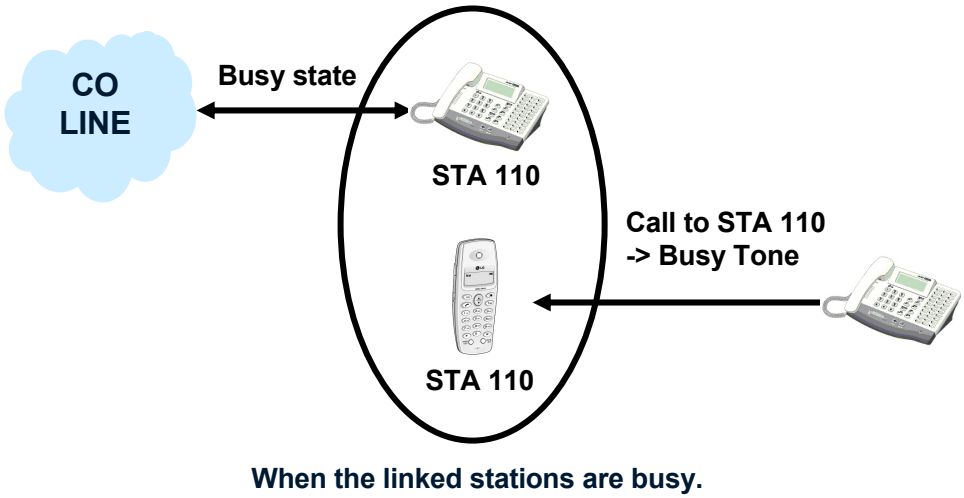



**Figure 2.9.2b Ringing in Linked Pair (one Busy linked station)**

If one of two linked stations receives intercom calls/CO incoming calls (DISA/DID)/recall ring (system/exclusive hold / transfer), then the other linked station will receive ring together (refer to Ref. A, Ref. B). If one station of linked pair goes to DND or call forward or pre-selected message display state (refer to Ref. D, Ref. E), then linked station goes to the same state automatically. Also, if any station in a linked pair comes out of this state, then the other comes out simultaneously.

If one of linked stations is busy, the LCD of the other station will display “IN USE AT LINK STA”. When a linked station is busy, the other idle linked station will not receive ring for CO lines, transferred ring or intercom calls.

### Condition

- It is available to make 13 linked station pairs.
- A station can be linked with only one station.
- The intercom number of two linked stations is operated as one number for all features.
- The presented number of linked pair is the first station number (Master) which is assigned by Admin Programming.
- The station attributes of the second station (Slave) will follow the attributes of Master's. (Ex. Day/Night COS, CO Warning Tone, CO Auto Hold, CO Call Drop, Alarm)
- Intercom box, DSS/DLS or ISDN phone cannot be linked with a station.
- It is operated with Tone mode in linked station pair regardless of intercom Answer mode (STA program 1 2).
- Attendant station can't be linked with the other station. But, the linked station cannot use attendant features (refer to Ref. F).
- A linked station can call his pair station by dialing their own number. It is possible to make CO line/Intercom Transfer between two pairs.

### Reference

**A.** Hold: 2.3.3.1

**B.** Call Transfer: 2.3.2

**C.** DND: 2.4.9

**D.** Call Forward: 2.3.1

**E.** Attendant: 2.13

### Admin Programming

■Linked Station Pairs (PGM 179)

# 2.10 External Device Control

## 2.10.1 Door Open

**Description**
Relay in ipLDK can be used for the Door Open feature.

| Model | REMARK |
|---|---|
| ipLDK-20 | MBU: 2 Relays |
| ipLDK-100 | MPE: 2 Relays<br>MISB: 4 Relays |
| ipLDK-300/300E | RAU: 3 Relays<br>MISB:4 Relays |

| Door Open Code | | | ITEM | REMARK |
|---|---|---|---|---|
| ipLDK-20 | ipLDK-100 | ipLDK-300/300E | | |
| #*1 | #*1 | #*1 | 1st Door Open | |
| #*2 | #*2 | #*2 | 2nd Door Open | |
| | #*3 | #*3 | 3rd Door Open | |
| | #*4 | #*4 | 4th Door Open | |
| | #*5 | #*5 | 5th Door Open | |
| | #*6 | #*6 | 6th Door Open | |
| | | #*7 | 7th Door Open | |

**Operation**
To Registered Door Open, perform the following Steps:

1. Dial the Door Open code, or press the programmed **{DOOR OPEN}** button.
2. Press the **[TRANS/PGM]** button.
3. Press the desired FLEX button to be assigned).
4. Type # + *+ 1 (1st Door open).
5. Press the **[HOLD/SAVE]** button to accept changes.

**Admin Programming**
- External Control Contact (PGM 168)
- Door Open Timer (PGM 181 – FLEX 5)
- Door Open Enable/Disable (PGM 112 – FLEX 22)

## 2.10.2 Door Phone

### Description

A convenient intercom box can be connected to the system. The intercom box can receive page announcements and intercom calls. And the intercom box can signal assigned stations in the system. Any combination of DKTUs or intercom boxes can be arranged in the system. The Figure 2.10.1 describes the operation of Door phone.

*Ex.)*

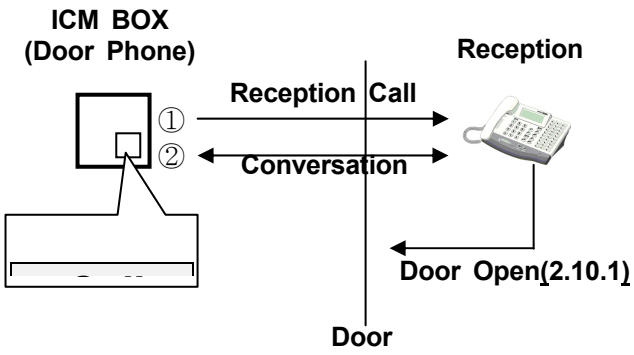



**Figure 2.10.1 Door Phone**

### Operation

To call an intercom box, perform the following Steps:

1. Lift the handset or press the **[MON]** button.
2. Dial station number of intercom box or press the flexible button for the intercom box.
3. After hearing a warning tone, announce the call.

To place a call from an intercom box:

1. Press the **[CALL]** button and assigned station will ring.

To answer an intercom call at a station assigned for intercom box signals:

DKTU

1. Press flexible button for intercom box.

SLT

1. Go Off Hook.

To place intercom box to DND mode (refer to Ref. A):

1. Press the **[DND]** button.

### Condition

- The intercom Box cannot attend a conference (refer to Ref. B).
- The CO call is not received at intercom box.
- An intercom box can be a member of page zone group (refer to Ref. C).
- To receive intercom box call, set intercom Box Signaling value 111 to ON (ADMIN program – FLEX 6). In case of DKTU, DSS of intercom box should be assigned on its flexible button.
- If Nation code is TELKOM or ISRAEL, DSS button for ICM Box should be assigned to the SLT (ADMIN program 115).
- SLT or WHTU can receive only one call from intercom box.
- The new intercom box – LDP-DPB – has the **[CALL]** button only.

**Reference**

**A.** DND: 2.4.9

**B.** Conference: 2.7

**C.** Paging: 2.8

**Admin Programming**

- ICM Box Signaling (PGM 111 – FLEX 6)
- Station ID Assignment (PGM 110)
- ICM Box Music Channel (PGM 171 – FLEX 3)
- ICM Box Timer (PGM 181 – FLEX 6)

## 2.10.3 Loud Bell

**Description**

The LBC (Loud Bell Control) contacts are activated when the assigned station receives ringing from an incoming CO line (if assigned ring), transferred CO line, or intercom call.

| Model | REMARK |
|---|---|
| ipLDK-20 | MBU : 2Realys |
| ipLDK-100 | MPE : 2Relays<br>MISB : 4Relays |
| ipLDK-300/300E | RAU : 3Relays<br>MISB :4Relays |

**Condition**

- LBC contacts can be assigned individually to the station. All the contacts may be assigned to the same station but, only the first contact will be activated in the intercom call.
- The LBC 1 can be programmed to be operated as an external night ring contact as well as a LBC contact.
- In the night mode, LBC 1 will follow UNA (refer to Ref. A) ring assignment and will ignore the station ring.
- An external ringing device should be attached to the contacts.

**Reference**

**A.** UNA (Universal Answer): 2.1.7

**Admin Programming**

- External Night Ring (PGM 160 – FLEX 7)
- Universal Answer (PGM 141 – FLEX 8)
- External Control Contacts (PGM 168)

# 2.11 Voice Service

## 2.11.1 Recording System VMIB Announcement

**Description**

Attendant station in the system can record the voice announcements as system greetings and prompts.

System greetings should be recorded before use. System prompts in user's language are contained as default in VMIB. But users can also modify those prompts.

Prompts for date and time are contained in VMIB to be used for date and time stamping. With the help of these prompts, users can understand when the voice message has arrived. Prompts for date and time are also built-in and recorded in user's language.

**Operation**

To record system greetings from Attendant:

1. Press the **[TRANS/PGM]** button and dial 0 6.
2. Dial the message number. Then you will hear the announcement "Press the **#** key to record." If there is already a recorded message in the number dialed, a corresponding message will be played.
3. Dial **#** to start recording. Start the recording after hearing the announcement "Record your message" and hearing the confirmation tone.
4. Or, dial ***** to record using an external music port on the MBU.
5. Press the **[HOLD/SAVE]** button to finish recording. Then confirmation tone is heard and you can record the next one.
6. Pressing the **[MON]** button while recording, then the recording is stopped and the recorded message is saved.

To delete system greetings from Attendant:

1. Press the **[TRANS/PGM]** button.
2. Dial the code **0 6**.
3. Dial the appropriate message number (when there is a recorded message in the number dialed, the recorded message is played).
4. Press the **[SPEED]** button while the message is playing to delete it.

To add additional message on VMIB message:

1. Press the **[ADD]** soft button while listening to the message (on LDP-6000/7000).
2. Record additional message.
3. Press the **[HOLD/SAVE]** button.

To rewind the current message:

1. Press the **[REWIND]** soft button, the message is rewound with the VM MSG Rewind Timer (on LDP-6000/7000).

**System Prompt Messages (Fixed)**

| No | Messages |
|---|---|
| 071 | VMIB MOH |
| 072 | Reserved |
| 073 | Invalid Number Prompt |
| 074 | Time Out Prompt |
| 075 | Retry Prompt |
| 076 | Transfer to Attendant Prompt |
| 077 | Reserved |
| 078 | Leave Message Prompt |
| 079 | Record Start Prompt |
| 080 | Authorization Code Prompt |
| 081 | Busy Prompt |
| 082 | Reserved (for Office version)<br>Wakeup Prompt (Hotel version only) |
| 083 | Station Off-net Forward Prompt |
| 084 | DND Prompt |
| 085 | No Answer Prompt |
| 086 | Reserved |
| 087 | Reserved |
| 088 | Remote VMIB Control Main Menu Prompt |
| 089 | Remote VMIB Sub-menu for digit 1 in Main Menu |
| 090 | Reserved |
| 091 | Reserved |
| 092 | Reserved |
| 093 | Remote VMIB Sub-menu for digit 2 in Main Menu |
| 094 | Remote VMIB Sub-menu for digit 3 in Main Menu |
| 095 | Remote VMIB Sub-menu for digit * in Main Menu |
| 096 | Leave Message after Tone Prompt |
| 097 | Message waiting indication Prompt |
| 098 | Default User Greeting Prompt |
| 099 | CRS Announcement Prompt |
| 100 | |

| MODEL | Max. message per VMIB | Max. message per SYSTEM | Max. VMIB per system |
|---|---|---|---|
| ipLDK-20 | 800 | 800 | 1 |
| ipLDK-100 | 2000 | 4000 | 2 |
| ipLDK-100/300E | 2000 | 6000 | 3 |

**Condition**

- System Greetings message are 001-070 as default value. User can select one of 70 messages.
- System Prompt messages are 071-100 as default value. The number is message and user cannot change the numbering plan arbitrarily, but users can also modify those prompts by recording their own messages in the number.
- System greetings and prompts can be recorded only at system attendant station.
- There is no time limit to record system greetings and prompts at attendant station.
- If the VMIB is not installed in the system, it is impossible to record system greetings and prompts. Error tone will be heard.
- If there is a recorded message in the bin, the already recorded message is played when user dials the message number.
- If user stops recording by pressing the **[MON]** button or on-hook the receiver while recording, the already recorded message is saved. User should delete the recorded message to cancel the recording.
- To record or delete a message at attendant station, all the VMIB ports should be idle state.
- When a call is transferred to the attendant, 'Transfer to Attendant' Prompt will be provided to the caller and ring-back tone will be heard after the announcement.

- If there is no recorded greeting or prompt, the corresponding tone will be heard.
- It is possible to use only 100 messages for system greetings (system greetings, system prompt).
- When the memory is full while recording a system greeting, the recorded message before message full will be saved.
- It is available for station groups to have different system greetings.
- When recording system greetings and prompts at attendant station, they will be saved at all VMIB in the system.
- The system supports system prompts (072~100) basically. But users may use their own prompts by recording the prompts at attendant station.
- When user uses USB Call Recording S/W, Call recording can be started with beef tone. If user do not want to hear beef tone but want to hear call recording start announcement, this announcement can be recorded system announcement 099.
- ADD and REWIND feature are not working on previous VMIB board. These are working on VMIBE board.

**Admin Programming**

- VMIB Access (PGM 113 – FLEX 2)
- VMIB User Record Timer (PGM 181 – FLEX 3)
- VMIB Valid User Message Timer (PGM 181 – FLEX 4)
- Station Group Assignment and Attributes (PGM 190 and 191)

## 2.11.2 Remote Control

**Description**

An outside caller through DID/DISA (refer to Ref. A) can access VMIB after calling a station which is in VMIB Forward mode. Entering VMIB controlling mode, the user can retrieve received messages, change user greeting, release Call Forward to VMIB, etc.

An ICM caller also can access VMIB after calling a station which is in VMIB Forward mode. Entering VMIB controlling mode, the user can retrieve received messages, change user greeting, release Call Forward to VMIB, etc.

All operation is same as previous CO remote Control.

**Operation**

To enter Remote VMIB Control mode, perform the following Steps:

1. Dial the station number forwarded to VMIB from an external party with DID/DISA or an another extension.
2. The User greeting should be heard.
3. While the user greeting is playing, press the * key; “Enter your password” is heard.
4. Enter the password (authorization code) and press the # key (if authorization code is longer than 5 digits, the # key is not needed).
5. A message should be heard describing the number of messages present in the inbox.
6. Press the appropriate number (refer to values).
   - 1 = to retrieve voice messages
   - 2 = to listen or change user greeting
   - 3 = to release Call Forward to VMIB mode
   - * = to exit remote VMIB Control mode

To listen to the received messages:

1. Dial **1** in the main menu of Remote VMIB control mode.
2. The recorded time & date and recorded message should be heard.
3. Press the appropriate dial number (refer to values).

- 1 = to listen to the current message again
- 2 = to listen to the next message
- 3 = to delete the current message
- 4 = to delete all received messages

To change the user greeting:

1. Dial 2 in the main menu of Remote VMIB control mode.
2. While the User greeting is being played, press the # key to record a new user greeting.
3. Record the new user greeting.
4. Press the * key when the recording is finished and then the step will go to the main menu.

To release Call Forward to VMIB mode:

1. Dial 3 in the main menu of Remote VMIB control mode.
2. The VMIB forward mode of the station is released.

To exit VMIB Control mode:

1. Dial * in the main menu of Remote VMIB control mode.

**Condition**

- Pressing * key while operating in a sub-menu, the system will go to the main control menu.
- If the user doesn't enter any digit while Inter-digit time, the connection is dropped automatically.
- If VMIB User Record Timer expires while recording user greeting, the recording is finished and will go to main menu.

**Reference**

**A.** DID: 2.1.3

**B.** DISA 2.1.4

**Admin Programming**

- VMIB User Record Timer (PGM 181 – FLEX 3)
- Inter-digit Timer (PGM 181 – FLEX 8)
- VMIB Message Rewind Timer (PGM 181 – Flex 17)

## 2.11.3 Two-way Recording

*2.11.3.1 Two-way Recording via SMDI*

**Description**
This feature allows a station to record a conversation on the mailbox by pressing a **{RECORD}** button while the station is talking with CO party.

**Operation**
To set a flexible button programmed for 2-way record feature,

1. Press the **[TRANS/PGM]** button.
2. Press the FLEX button (to be assigned).
3. Press the **[TRANS/PGM]** button.
4. Dial 54.
5. Press the **[HOLD/SAVE]** button.

While a station user is the conversation with the CO line caller, the User can press the **{RECORD}** button, then the conversation will be recorded on user's mailbox. The user press the **{RECORD}** button again or hang up, then the recording will be canceled.

Protocol: When the User presses the **{RECORD}** button, the System will send a SMDI message to Voice Mail PC through RS-232C cable. The format is same as follows:

**=>"crlfMD0010mmmmH0xxxxxxxxxbbcrlf^Y"**

**cr: carriage return,**

**lf: line feed,**

**mmmm: VM port number,**

**H: Action code for recording,**

**xxxxxxxxx: extension which try to record,**

**b: ascii space.**

**Condition**

- During the recording feature is enabled, the **{RECORD}** button will flash at 240 ipm and if it is disabled, the **{RECORD}** button will be extinguished.
- It is not available to SLT.
- Recording operation is canceled when station goes off-hook, press **{RECORD}** button again, press **[FLASH]** button or CO party hangs up.
- This feature is available on SMDI mode only not DTMF mode.
- Not available to intercom call recording.
- If the system has VMIB, the conversation will be recorded to VMIB.
- If Pole 3 of DIP SW1 of MBU is set to Off (down position) and system has VMIB, the conversation will be recorded to VMIB in ipLDK-20.
- If Pole 5 of DIP SW of MPB is set to Off (down position) and system has VMIB, the conversation will be recorded to VMIB in ipLDK-100/300/300E.

**Admin Programming**

■Two Way Recording (PGM 112 – FLEX 10)

*2.11.3.2 Two-way Recording via VMIB*

**Description**

This feature allows a station to record a conversation on the mailbox by pressing a **{RECORD}** button while the station is talking with CO party. The Figure 2.11.3.2 describes the operation of Two-way Recording.

Ex.)

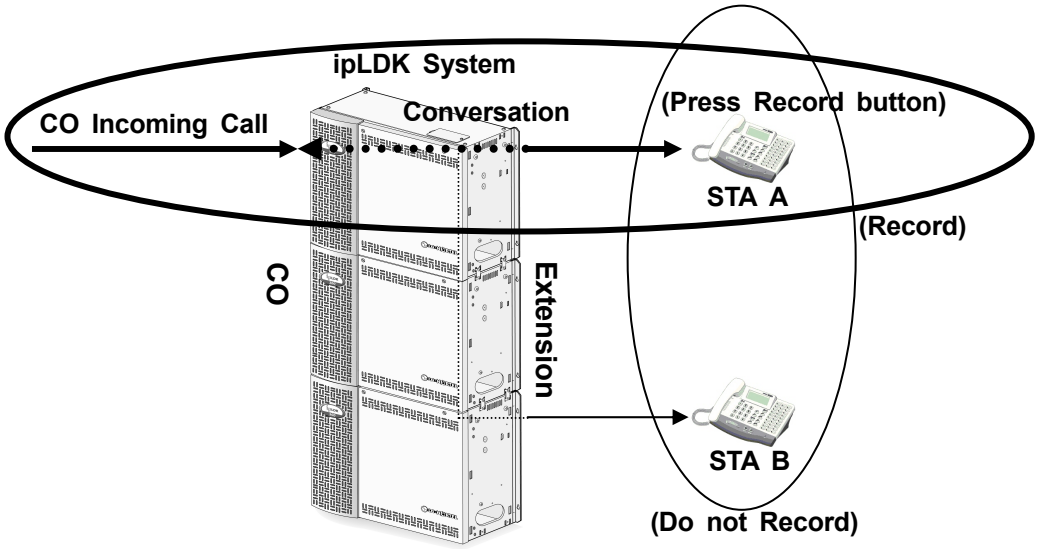



**Figure 2.11.3.2 Two-way Recording**

**Operation**

To set a flexible button programmed for 2-way record feature:

1. Press the **[TRANS/PGM]** button.
2. Dial flexible button (to be assigned).
3. Press the **[TRANS/PGM]** button and dial '54'.
4. Press the **[HOLD/SAVE]** button.

While a station user is the conversation with the CO line caller, the user press the **{RECORD}** button, then the conversation will be recorded on user's mailbox. The user presses the **{RECORD}** button again or hangs up; the recording will be canceled.

**Condition**

- During the recording feature is enabled, the **{RECORD}** button will flash at 240 ipm and if it is disabled, the **{RECORD}** button will be extinguished.
- Not available to SLT.
- Recording operation is canceled when station goes off-hook, press **{RECORD}** button again, press **[FLASH]** button or CO party hangs up.
- Not available to intercom call recording.
- If the system has an external voice mail system, the conversation will be recorded to the external voice mail system.

**Admin Programming**

■Two-Way Recording (PGM 112 – FLEX 10)

## 2.11.4 Recording User VMIB Announcement

**Description**
If the access to the VMIB is allowed, user can record User Greeting and make a call be forwarded to VMIB port according to forward condition type if user enables forward. And the caller can leave a voice message wait at the station after hearing user greeting.

**Operation**
To record a user greeting at a station, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 6 1.
3. The announcement “Press the # button to record” will be played; if there already is a recorded message in the number dialed, the recorded message will be played.
4. Dial # to start recording; start recording after hearing the announcement “Record your message” and a confirmation tone.
5. Press the **[HOLD/SAVE]** button,
   OR
6. Press the **[MON]** button to finish the recording; a confirmation tone is heard.

To delete a user greeting at a station:

1. Press the **[TRANS/PGM]** button.
2. Dial 6 6.
3. The User greeting is deleted and Forward is deactivated.

To activate call forward to VMIB from a station:

1. Go off-hook or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial the forward type (1-4).
4. Dial the # key; a confirmation tone is heard.

To deactivate call forward to VMIB from a station:

1. Press the **[DND/FOR]** button.

To leave voice message wait at a Station:

1. The caller will hear the User greeting and the “Record your message” announcement.
2. After a beep tone, record your message.
3. Hang-up to complete recording.

To retrieve a recorded voice message wait at the Station:

1. Press the flashing **[CALLBK]** button; for SLT and 2/8 BTN DKTU, dial 557 (refer to Ref. A).
2. The message number prompt is heard and the voice message (FIFO or LIFO) and Time & Date prompt for the message is played.
3. Pressing the **[CONF]** button, the current message is deleted and the next message is heard.
   - For SLT and 2/8 BTN DKTU – Dial **# 1**, To delete a message.
   - For SLT and 2/8 BTN DKTU – Dial **# 2**, To listen to next message.
   - For SLT and 2/8 BTN DKTU – Dial **# 3,** To repeat a message.
4. Pressing the **[ADD]** soft button, you can record the additional message (It can be possible LDP-6000/7000 which has 3 soft key).
5. Pressing the **[REWIND]** soft button, return to the beginning of the current message with VM MSG Rewind Timer (LDP-6230/6212 with 3-soft keys).

**Condition**

- There is no time limit to record user greeting in a station.
- When a caller leaves a voice message wait, the recording time is controlled by Valid User Message Timer (ADMIN program 181 – FLEX 4) and VMIB User Record Timer (ADMIN program 181 – FLEX 3). When the recorded message shorter than Valid User Message time, the message is not saved. Also, the User Record Timer expires, confirmation tone is heard and the message is saved in the station.
- If the station has several messages to be retrieved by pressing the **[CALLBK]** button, the message only with station number will be retrieved at first. (Message wait with station number -> VMIB Message wait -> CLI Message wait -> VM group Message wait).
- Pressing the **[CALLBK]** button at the calling station before user greeting is played, the message wait with only station number is saved in the called station.
- When a user calls a station which is forwarded to VMIB, he will hear user greeting and beep tone. After beep tone, user can leave a voice message.
- If all the VMIB ports are busy, ring-back tone will be provided instead of user greeting. And VMIB Station Forward Timer is started to retry to answer.
- User can leave and receive message wait using SLT with message wait lamp.
- Individual user greeting and VMIB message wait are protected with system reset.
- To retrieve left message wait, the order of playing is changeable. Originally, TIME, DATE, and a left message are played. If the ADMIN is set, DATE, TIME, and a left message are played.
- To retrieve left message wait, the Message Wait Retrieve Password would be used by ADMIN. If ADMIN PGM 113 & FLEX 8 is set, a user should enter that stations' AUTHORIZE CODE to retrieve.
- While retrieving messages, the User can rewind messages as allowed by the Rewind Message Timer (PGM 181-FLEX 17).

**Reference**

**A.** Refer to **ipLDK Hardware Description and Installation Manual**, Message Wait/Callback Return Code (PGM 106 – FLEX 17)

**Admin Programming**

- VMIB Message Type (PGM 111 – FLEX 17)
- VMIB Access (PGM 113 – FLEX 2)
- VMIB MSG Retrieve PASSWORD (PGM 113 – FLEX 8)
- VMIB MSG Retrieve Date/Time (PGM 113 – FLEX 9)
- VMIB Forward No Answer Timer (PGM 181 – FLEX 1)
- VMIB User Record Timer (PGM 181 – FLEX 3)
- VMIB Valid User Message Timer (PGM 181 – FLEX 4)
- VMIB Rewind Message Timer (PGM 181-FLEX 17)

## 2.11.5 VMIB Announcement for Auto Attendant

**Description**

Incoming CO calls may be answered by VMIB and rerouted to another station with CCR when attendant does not answer the call until No Answer Timer expires or attendant is busy.

**Operation**

To operate Auto Attendant, perform the following Steps:

1. When an incoming call is received at attendant.
2. The call is not answered when the No Answer Timer expires.

3. The call is forwarded to the Auto attendant; the caller will hear a VMIB message and can reroute to another user using CCR.

**Condition**
- Not available for recall and transferred calls.
- CO ringing should be assigned to only the Attendant.

**Admin Programming**
- ■Auto Attendant VMIB Announce Number (PGM 165)

## 2.11.6 VMIB Message Transfer

**Description**
The received message at a station may be transferred to another station.

**Operation**
To transfer a message to the other station, perform the following Steps:

1. While hearing a message, dial the Station number to be transferred to.
2. The message will be transferred to the Station.

**Condition**
- If a transferring station is empty, user will hear error tone and can retry to the other station within 3 seconds.
- SLT with MSG wait lamp can also transfer VMIB messages.
- The transferred station should have allowance of VMIB access.
- A user has a possibility to add an additional voice message when he transfers a voice message to another station (LDP-6000/7000 with 3 soft keys.)

**Admin Programming**
- ■VMIB Access (PGM 113 – FLEX 2)

## 2.11.7 VMIB Message with CLI

**Description**
When an outside caller leaves a message, the CLI is saved with message. The CLI will be displayed while hearing the message and the station user can make a callback for the CLI.

**Operation**
Call back during hearing a message:

1. Press the soft button **[CALLBACK].**
2. Then system dials the displayed CLI automatically.

**Condition**
- This only works with a DKTU that has a 3 soft-buttons.
- Though a user makes the callback for the CLI, the VMIB message is not deleted.

## 2.11.8 No Answer Call to VMIB

**Description**
A CO or ICM Call is routed to a station, and this Call is not answered by someone while predefined [NO ANS TO VMIB] time, the Call is rerouted to the station's Voice Mail Box.

**Operation**
1. Call to Station 100.
2. No answer at Station 100.
3. NO answer to VMIB timer expired.
4. Recording announcement is played.
5. After confirm tone is heard, the caller can record voice message.

**Condition**
- If a Destination is forwarded to another destination (another station, hunt group, VMIB), then the timer will not be activated.
- Hunt Call is not assigned this timer regardless No Answer to VMIB ON/OFF option, because Hunt individual call flow.
- To correct working this feature, VMIB ACCESS option must be ON(PGM 113 – FLEX2).
- If a user records the user greeting(PGM 61), it will be provided before the recording announcement.
- This is also applied when a user goes to busy state and call is queuing/waiting for it to become free.

**Admin Programming**
- NO Answer FWD to VMIB Timer(PGM 181 – FLEX20)
- Auto Forward To VMIB (PGM 113 – FLEX14)
- VMIB Access (PGM 113 – FLEX 2)

## 2.11.9 Direct Transfer to VMIB

**Description**
CO / ICM Call can be directly transferred to a station's Voice Mail Box.

**Operation**
Below operation is executed at transferring Station.
1. Station is on the CO/ICM Call.
2. Press **[TRANS]** button to transfer to another station.
3. Press **[CALL BK]** button.
4. Dial a destination Station number or Press DSS button of desired Station.
5. Hang Up when transfer is completed.
6. After transfer action is ended, transferred party hear recording message and confirm tone, can record voice.

**Condition**
- VMIB Access option must be ON( PGM 113 – FLEX2).
- Direct transfer to Net number's VM box is not allowed.
- Direct transfer to ICM BOX is not allowed.
- If VMIB channel is all used, recalling is served to transferring station.

**Admin Programming**

- ■VMIB Access (PGM 113 – FLEX 2)

## 2.11.10 DID Call to Each Station Voice Mail Box

**Description**

In the ipLDK system, maximum 1000 Flexible DID Table entry can be programmed. Each Flexible DID Table entry has six attributes ‘DID Name’, ’Day Destination’, ’Night Destination’, ’Weekend Destination’ ‘Lunch Destination’ and ’Reroute Destination’. If destination of Flexible Conversion DID table(PGM 231) is programmed as Station ‘s VMIB. If DID Call is routed to Station’s VMIB, external DID caller can leave message directly.

**Condition**

- If the Day/Night/Weekend/Lunch DID destination is busy, call is rerouted to Reroute Destination.
- VMIB Access option must be ON (PGM113-FLEX2).

**Admin Programming**

- ■VMIB Access (PGM 113 – FLEX 2)
- ■DID Destination( PGM 231)

## 2.11.11 CCR Call to Each Station Voice Mail Box

**Description**

In CCR table, each station voice mail box can be assigned by each VMIB announcement.

If user greeting is recorded, calling party hear user greeting and can leave a message, and if user greeting is not recorded, calling party just hear system announcement and leave a message.

**Condition**

- VMIB Access option must be ON (PGM113-FLEX2).

**Admin Programming**

- ■VMIB Access (PGM 113 – FLEX 2)
- ■CCR table( PGM 228)

# 2.12 SMDR (Station Message Detail Recording)

**Description**

The ipLDK System SMDR (station message detail recording) provides details information about both incoming calls and outgoing calls. In this feature, it is programmable to record all calls or just outgoing long distance calls. SMDR information includes outgoing CO Line, dialed number, time, date, station that answer the call, duration of call and etc. Authorization codes may also be entered and recorded.
SMDR for Intercom call(include ICM SMS) is also provided. ICM call SMDR is controlled by admin programming.

**Operation**

To print the SMDR, perform the following Steps:

1. Activate the PC utility program on a networked PC.
2. Connect the serial port of MBU to the serial port of the PC with the RS-232C cable.
3. At the Attendant Station,
   - Press the **[TRANS/PGM]** button.
   - Dial **0111** (Station Base) or **0113** (Group Base).
4. Enter the Station or Group range.
5. The SMDR is printed to PC.

To delete a SMDR:

1. Press the **[TRANS/PGM]** button.
2. Dial 0112 (Station Base) or 0114 (Group Base).

To abort SMDR printing:

1. Press the **[TRANS/PGM]** button.
2. Dial 0116.

**Condition**

- There is an assignable SMDR record option ADMIN Program (PGM177 – FLEX 3).
- If SMDR – LONG DISTANCE ONLY is selected, only outgoing toll call will be printed.
- If SMDR – ALL CALL is selected, incoming and outgoing local and long distance call are printed.
- If user dials any number with a programmed long distance code as the first and second digit dialed or any number with more than maximum local call digit count, it will be regarded as long distance call. (Max. local call digit count is programmable and the default value is 7).
- The SMDR output records contain the following:
  - 5-digit Station call originator (terminating for incoming field)
  - 3-digit used CO line field
  - 8-digit call duration field (HH:MM:SS)
  - 8-digit year, month, and day (YY/MM/DD)
  - 5-digit time of day call originator field
  - 1 digit call identification digit-first digit in digit dial field
  - 18-digit collected dial digit field
  - 2-digit account group number field
  - 5-digit pulse metering count field
  - 10-digit call cost field
  - 12-digit account code field

- When the SMDR storage pools are almost exhausted, the system gives “Buffer full” warning signal to the attendant. And the LCD of attendant station will indicate how many SMDR records are remained to store for some intervals.
- Some stations can be grouped to count the billing with a SMDR receipt using a SMDR account group.
- ‘SLT DTMF RLS TMR’ should be adjusted to reasonable value in order to print all digits that SLT dialed.
- ICM SMDR is not supported for LOST CALL.
- Only Calling Party NO is displayed at STA field.
- Only the Station No which Getting ICM call is displayed at DIALED field. (ex) – E xxx : E is internal call, S is SMS. )
- SMS SMDR is also controlled by PGM 177 – F17, 18 (toggle ON/OFF).
- ICM SMDR record format is same as existing SMDR record format.
- ICM HUNT Call SMDR record is same as just ICM Call. For example, Station 100 call to Hunt 620, and answer 620 member Station 110, then **[STA]** field Station 100, and **[DIALED]** field Station 110.
- Paging call SMDR can be printed. At **[STA]** field, paging station number is displayed, and be paged station number is displayed at **[DIALED]** field.
- In case of ICM Conference Room SMDR, station number which is entered Conference room is printed at STA field and Conference room no is printed at DIALED field, for example **[Conf Rm 1]**.
- In case of Conference feature, Conference initializing station is always printed at STA field and Conference members are printed at DIALED field.
- In Hands free mode or Private mode, SMDR can be printed.
- ICM call parking feature SMDR is printed as two records. Before parking, and after parking and someone is answered records. And park recalling is printed as another record.
- In ICM call parking feature, parked time is not calculated SMDR time. Two records are produced. Before parking and after parked call answering time is displayed.
- ICM SRMR is possible when ICM SMDR SAVE is set to ON (PGM 177 – F17)
- ICM SMDR Print is possible when ICM SMDR PRINT is set to ON (PGM 177 – F18)

**Admin Programming**

- SMDR Attributes (PGM 177)
- Metering Unit (PGM 142 – FLEX 3)
- SLT DTMF RLS Timer (PGM 181 – FLEX 13)
- SMDR Local Code Table (PGM 204)

## 2.12.1 AOC (Advice Of Charge)

### Description

The AOC service provides outgoing call charging to the user in public ISDN. According to the ADMIN programming, the saved and printed information is provided to the PC or user's LCD. This function is applicable to the most European countries.

### Operation

During the conversation or after release a CO call, the ISDN facility IE carry the AOC information. User can see it with SMDR print after a call.

- *** CHARGE NOT AVAILABLE**
- **al 08 02 01 ** 02 01 23 05 00**
- *** FREE OF CHARGE**
- **al 0a 02 01 ** 02 01 23 30 02 81 00**
- *** NORMAL CHARGING**
- **al 20 02 01 ** 02 01 23 30 18 30 16 al 05**
- **81 03 @@ @@ @@ a2 07 81 05 %% %% %% %% %%**
- **82 01 01 82 01 01**
- **[**] : The rule is changed in each call.**
- **[@@ @@ @@] : It means charging current unit. (IA5)**
- **[%% %% %% %% %%] : It means real current value displayed with**
- **You can see it with SMDR print after the call.**

### Condition

- It is displayed on the LCD instead of call timer and changed based on the receipt of each call charging information.
- The information of AOC includes the Unit or Currency.

### Admin Programming

- Advice Of Charge (PGM 200 – FLEX 1)
- SMDR Attribute (PGM 177)

## 2.12.2 Print-out

### Description

Lost call means that the caller gives up and terminates the call before the call is answered. The format of the individual call record is illustrated below, and the contents are focused on each case about the types of lost call.

**NO STA CO TIME START DIALED**
**----- ---- --- ------ ---------- ----------**
**0001 EXT 031 00:00:10 24/05/99 11:55 R RING 00:05**
**Normal incoming call is received at an assigned stations of CO 031 during 5 sec.**
**0002 101 003 00:01:20 25/05/99 16:23 R RNG 00:09**
**DID call is disconnected during it is being forwarded to ATD STA 101, because the dialed station does not exist.**
**0003 100 001 00:00:20 25/05/99 18:11 R100 RING 00:04**
**DID call is received at STA 100 during 4sec and disconnected.**
**0004 102 002 00:01:20 26/05/99 18:37 R103 RING 00:04**
**DID call is received at STA 102 via unconditional call forward to STA 103 during 4 sec and disconnected.**
**0005 621 008 00:00:20 26/05/99 13:02 G620 RING 00:06**
**DID call is received at Ring Group 621 during 6sec and disconnected.**
**0006 100 001 00:00:04 06/05/99 16:04 H100 RING 00:02**
**DID call is disconnected while STA 100 is being held it.**
**0007 102 001 00:00:07 06/05/99 17:04 H100 RING 00:02**
**DID call is disconnected while it is being transferred from STA 100 to STA 102.**

**G: Incoming call to hunt group (see Ref.1), but the caller hangs up before answer**
**H: Answered incoming call was transferred to another station, but the caller hangs up before answer. And incoming call placed on hold state and cleared down in hold state.**
**R: Direct call (DID) to a station, but the call was disconnected before the station answers. Or direct call to station (A), but station (A) does not answer and the call was forwarded to station (B). The call was disconnected before station (B) answers.**

### Operation

To print the lost call count of record, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0117 at Attendant station.
3. The lost call count of record is printed in the PC connected in the system.

To clear the lost call count of record:

1. Press the **[TRANS/PGM]** button.
2. Dial 0118 at Attendant station; “The lost call count is cleared” is printed and the lost call count time is restarted.

### Condition

1. This SMDR record is sent to RS-232C automatically as soon as the event takes place.
2. The SMDR record about lost call is not saved. Only the records are counted.
3. To activate this SMDR record, the SMDR field must be set in ADMIN programming.

### Reference

**A.** Hunt Group: 2.6

### Admin Programming

- SMDR Print Enable (PGM 177 – FLEX 2)
- Long distance/ All Call Recorded (PGM 177 – FLEX 3)
- Print Lost Call (PGM 177 – FLEX 6)

# 2.13 Attendant Service

**Description**

An attendant properly controls the incoming calls by transferring calls and accessing the unanswered calls, etc. Attendants can change simple settings of whole system or intercom tenancy groups (LCD date/time format, etc.).There are 2 types of attendants in the ipLDK system. The types of attendant and feature of each attendant type are:

**Main Attendant** - max. 5 stations can be defined as main attendants. Main attendants control the whole system. And operation of main attendants effects on whole system. The first main attendant is called the system attendant. The system attendant can be changed, but can't be removed.

**Intercom tenancy Group Attendant** - each intercom tenancy group (refer to Ref.1) can have its own attendant. The intercom tenancy group attendant controls the stations belonging to the intercom tenancy group. And operation of intercom tenancy group attendants can effects on only intercom tenancy group which belongs to. Generally, the attendant of a station is the intercom tenancy group attendant which the station belongs to. If the intercom tenancy group attendant of the station doesn't exist, the main attendants will supply the station with attendant services.

Figure 2.13 describes the arrangement of Attendants within the System.

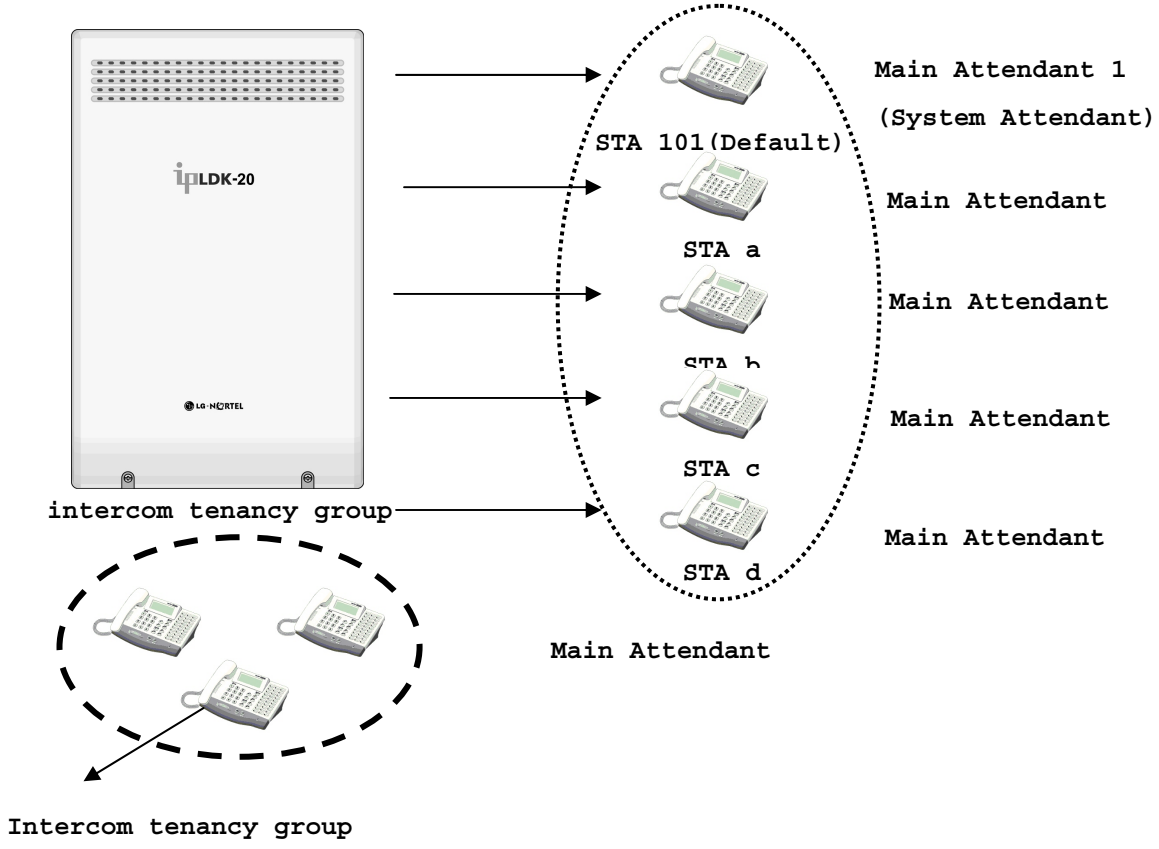



**Figure 2.13 Attendants of ipLDK system**

**Reference**

**A.** Intercom Tenancy Group: 2.4.15

## 2.13.1 Assign Attendant

**Description**
As default, first station (i.e., Station 100) is assigned as the System Attendant, and other attendants are not assigned.

Main attendants can be assigned ADMIN program 164, but Intercom tenancy group attendant can be assigned ADMIN program 120 – FLEX 1.

**Condition**

1. IP phone cannot be assigned as an attendant.

**Reference**

**A.** Intercom Tenancy Group: 2.4.15

**Admin Programming**

- Attendant Assignment (PGM 164)
- Intercom Tenancy Group - Attendant Assignment (PGM 120 – FLEX 1)

## 2.13.2 Attendant Call & Queuing

**Description**
Attendant call is the intercom call and CO call to an attendant. In order to make an intercom call to the attendant, a user enters the station number of the attendant or dials '0' button.

If a user dials '0' button, it rings at the assigned attendant of the intercom tenancy group which the station belongs to. If there is no assigned station as attendant, it rings at main attendant.

Call to any attendant will be queued, if the attendant is busy. Then, ring-back tone or MOH (refer to Ref. B) will be provided to the calling party (ADMIN program 160 – FLEX 1).

**Operation**
To call an attendant:

1. Lift handset or press **[MON]** button.
2. Dial **0** button,
   OR
3. Enter the station number of the attendant.

**Condition**

- When an attendant calls another attendant which is busy, the calling attendant will hear the busy tone and can make camp-on (refer to Ref. C) to called attendant.
- If attendant activates unconditional call forward (refer to Ref. D), the calls to attendant will follow the call forward process.

**Reference**

**A.** Intercom Tenancy Group: 2.4.15
**B.** MOH (Music On Hold): 2.4.17
**C.** Camp-on: 2.4.5
**D.** Call Forward - Unconditional: 2.3.1.1

**Admin Programming**

- Main Attendant Assignment (PGM 164)
- MOH Type (PGM 171 – FLEX 2)
- Intercom Group Attendant Assignment (PGM 120 – FLEX 1)
- Attendant Call Queuing RBT/MOH (PGM 160 – FLEX 1)

## 2.13.3 Attendant Forward

**Description**

The attendant can forward (Unconditional Call Forward) a call to the other station.(see Ref.1). The forwarded-to Station will substitute for the attendant temporarily, while the attendant is in forwarding state. Figure 2.13.3 describes that forwarded-to station serves attendant functions during Attendant Forward.

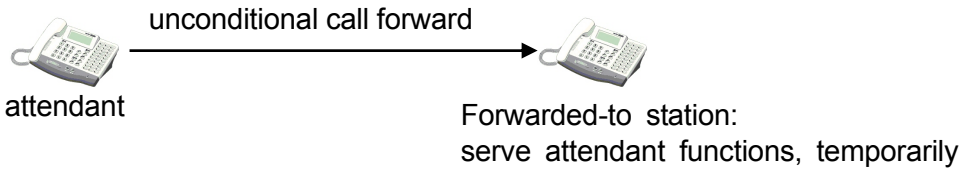



**Figure 2.13.3 Attendant Forward**

**Operation**

It is the same procedure as the Unconditional Call Forward.

To activate Attendant Forward:

1. Lift the Handset or press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Call Forward Code **1** (Unconditional Call Forward).
4. Dial Station number.
5. Hang up the handset and go on-hook.

To deactivate Attendant Forward:

1. In an idle state, press the **[DND/FOR]** button.
2. In an off-hook state, press the **[DND/FOR]** button and dial **#**.

**Condition**

- If the attendant assigns unconditional call forward to SLT or WHTU, the forwarded-to station only serve incoming calls as attendant call, attendant recall and others. The forwarded-to SLT or WHTU cannot activate attendant features.

**Reference**

**A.** Unconditional Call Forward: 2.3.1.1

## 2.13.4 Attendant Intrusion

### Description

When an attendant has an urgent message for a station on another CO call, the attendant can intrude upon the call and converse with the Station and the CO line party. The Figure 2.13.4 describes that the attendant converses with the other two CO parties after an attendant intrusion.

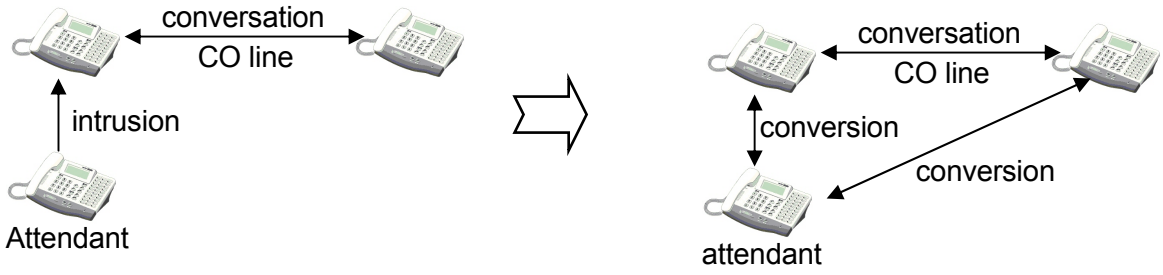



**Figure 2.13.4 Attendant Intrusion**

### Operation

To intrude on a CO call when attendant is receiving the intercom busy tone, perform the following Steps:

1. Press the programmed **{ATD INTRUSION}** FLEX button.
2. After intrusion tone, converse with the CO party.

To assign **{ATD INTRUSION}** FLEX button:

1. Press **[TRANS/PGM]**.
2. Press the FLEX button to be assigned.
3. Press the **[TRANS/PGM]** button.
4. Dial **8 6.**
5. Press the **[HOLD/SAVE]** button to accept changes.

### Condition

- In order to use this feature, Auto Privacy should be OFF (ADMIN PGM161) and Override Privilege (ADMIN PGM113 – FLEX 4) of the attendant should be enabled.

### Admin Programming

- Auto Privacy (PGM161)
- Privacy Warning Tone (PGM 161)
- Override Privilege (PGM 113)

## 2.13.5 Attendant Override

### Description

A station in DND state (refer to Ref. A) can not generally receive an incoming call.

The attendant, however, can temporarily invalidate the DND state. Therefore, the attendant can call and transfer to the station in DND state. The Figure 2.13.5 describes that the attendant can call the station in DND state after Attendant Override.

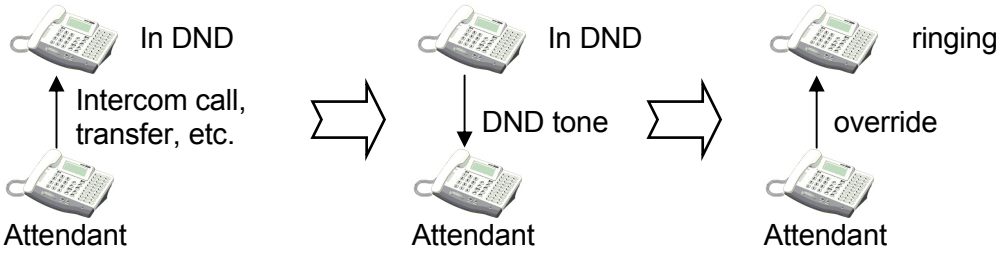



**Figure 2.13.5 Attendant Override**

### Operation

To override DND state at a Station while the Attendant is receiving a DND tone, perform the following Steps:

1. Dial ＊ or the last digit of the dialed station number,
   OR
2. Press the programmed **{Camp-On}** FLEX button.
3. The DND warning tone will be changed to the Intercom ring-back tone at the Attendant Station.
4. The Attendant can call a Station in DND state.

To assign the **{Camp-On}** FLEX button:

1. Press **[TRANS/PGM]**.
2. Press the FLEX button to be assigned.
3. Press the **[TRANS/PGM]** button.
4. Dial 8 5.
5. Press the **[HOLD/SAVE]** button to accept changes.

### Condition

- If the attendant with a transferred CO call overrides a station in DND state, and the station has the **{CO}** or **{LOOP}** button, attendant can transfer the CO call to the station in DND state.
- If the transferred-to station has no the **{CO}** or **{LOOP}** button, the CO call will be recalled to the attendant immediately.

### Reference

- DND: 2.4.9

## 2.13.6 Attendant Recall

**Description**
If the recalled CO call (transfer, hold) is unanswered by destination station, the CO call will be directed to the attendant. (refer to Ref. A, Ref. B). The Attendant will receive the recall ring for a time equal to the Attendant Recall Timer (ADMIN program 180 – FLEX 1). If the attendant doesn't answer the CO call for a time equal to the Attendant Recall Timer, the CO call will be disconnected.

**Condition**
- If the attendant of intercom tenancy group is not assigned, the CO call is recalled to the System Attendant.
- When a call in exclusive hold is recalled to the Attendant, the call is placed on system hold (refer to Ref. A).
- Private CO line will not be recalled to attendant (refer to Ref. D).

**Reference**
**A.** Hold: 2.3.3.1
**B.** Call Transfer: 2.3.2
**C.** Intercom Tenancy Group: 2.4.15
**D.** Private Line: 2.2.9

**Admin Programming**
- Attendant Recall Timer (PGM 180 – FLEX 1)
- I-Hold Recall Timer (PGM 180 – FLEX 5)

## 2.13.7 Change LCD Date/Time display

**Description**
The attendant can change the LCD Date/Time display format of stations in system.

Date: MM-DD-YY / DD-MM-YY (ex., August 4, 2004 -> 08-04-03 / 04-08-03)

Time: 12H / 24H (ex., eight thirty P.M. -> 08:30 PM / 20:30)

**Operation**
To change LCD Date format (toggle), perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 4 4.

To change LCD Time format (toggle):

1. Press the **[TRANS/PGM]** button.
2. Dial 0 4 5.

**Admin Programming**
- LCD Time/Date/Language Display Mode (PGM 169)

## 2.13.8 Day/Night Service

**Description**
When a CO call comes into the system, the destination of the CO call can be changed according to the time.

There are 6 ring modes – Day mode/Night mode/Weekend mode/Lunch mode/On-demand mode/Automatic Ring mode. The destination of a CO call can be set differently for each ring mode, while a User sets the destination of CO call with ADMIN program (refer to Ref. A). At Day mode/Night mode/Weekend/Lunch mode, the User can set the appropriate destination of CO call according to the situation (day or night or weekend or lunch).

Lunch mode can be used among day mode same as the name. So in weekly time table (PGM 233), there are lunch start time and lunch end time.

On-demand mode among the ring mode is used to supply a different destination of CO call except Day mode/Night mode/Weekend mode.

There are two way of changing ring mode as followings:

Automatic change of ring mode can be set in Weekly Time Table(PGM 233).

Manual change of ring mode can be set in ATD station.

The ring mode in Automatic Ring mode is classified as Day mode or Night mode or Weekend mode or Lunch mode according to Weekly Time Table (ADMIN program 233).

Only attendant can change the ring mode. If a user presses the **[DND/FOR]** button at the attendant station, user can select 1 to 6(Day to Lunch).

**Operation**
To change Day / On-demand / Night / Weekend / Automatic Ring mode, perform the following Steps:

1. Press the **[DND/FOR]** button at the Attendant Station and choice ring mode(1 to 6):

| | |
|---|---|
| ***1. DAY*** | ***2. NIGHT*** |
| 3. ON DEMAND | 4. WEEKEND |
| 5. AUTO RING MODE | 6. LUNCH |

To activate automatic ring mode in the Attendant Programming Mode:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 7 4.
3. Dial 5.
4. Press the **[HOLD/SAVE]** button to activate Automatic ring mode.

To deactivate automatic ring mode with Attendant Programming mode:

1. Press the **[TRANS/PGM]** button.
2. Dial **0 7 4**.
3. Dial **1**.
4. Press the **[HOLD/SAVE]** button to deactivate Auto ring mode; the type of time will be changed to DAY mode.

**Condition**
The default value of Weekly Time Table is as follows (entry number: 00). The first table entry (00) is for main attendants and others (01-15) are for intercom tenancy group attendants.

| Date | Day Start Time | Night Start Time | Weekend Start Time | Lunch Start Time | Lunch End Time |
|---|---|---|---|---|---|
| Mon | 09:00 | 18:00 | | -- : -- | -- : -- |
| Tue | 09:00 | 18:00 | | -- : -- | -- : -- |
| Wed | 09:00 | 18:00 | | -- : -- | -- : -- |
| Thu | 09:00 | 18:00 | | -- : -- | -- : -- |
| Fri | 09:00 | 18:00 | 18:00 | -- : -- | -- : -- |
| Sat | -- : -- | | 00:00 | -- : -- | -- : -- |
| Sun | -- : -- | | 00:00 | -- : -- | -- : -- |

- On-demand mode is not available in the Automatic Ring mode.
- The attendants of intercom tenancy group can change ring mode as well as main attendants. If an attendant of intercom tenancy group changes ring mode, only the ring mode of intercom tenancy group which the attendant belongs to is changed. But if a main attendant changes the ring mode, ring mode of the system will be changed.
- When the ring mode is set to Automatic Ring mode by main attendant, the ring mode of the system will follow the first table entry (entry number: 00) of Weekly Time Table.
- If the system ring mode is changed from the night/weekend/on-demand/auto ring mode to day mode, the ring mode of all Intercom Tenancy Group will change to the previous ring mode.
- If external night ring is enabled and the system is in night mode, the LBC 1 Contact will follow the incoming UNA assigned CO lines.

### Reference

**A.** Ring Assignment: 2.1.1

### Admin Programming

- CO Line Ring Assignment (PGM 144)
- External Control Contact (PGM 168)
- Weekly Time Table (PGM 233)

## 2.13.9 Disable Outgoing Access

### Description

The Attendant can take a particular CO line out of service. CO calls will not be able to be made through the CO line; incoming CO calls are not affected.

### Operation

To set a CO line in/out-of-outgoing service from the Attendant, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 7 3.
3. Press the desired **{CO line}** FLEX button; a confirmation tone will be heard when the status (in or out-of-outgoing-service) of the selected CO line is changed.
4. Press the **[MON]** button to return to idle.

### Condition

- Any attendant can use this feature.
- The LED of **{CO line}** FLEX button which is out-of-outgoing-service is flashing in attendant station but lightening in other stations.
- To release the-out-of-outgoing-service, press the flashing **{CO line}** FLEX button in attendant station.
- Though the desired CO line is busy, the attendant can still make the CO line out-of-outgoing-service. The out-of-outgoing-service feature will take effect after the CO line goes to idle.

## 2.13.10 ICM Box Music Selection

**Description**
The attendant can select the music channel source to provide the intercom Box.

**Operation**
To select the music source from the Attendant, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 7 5.
3. Dial the music source (00-12); music source will be heard, but if the music channel has no music source, no music will be heard.

   - Channel 00: Music is not used
   - Channel 01: internal music
   - Channel 02: External music
   - Channel 03: VMIB BGM (refer to Ref. A)
   - Channel 04 ~08: SLT MOH (see Ref. B)

4. Press the **[HOLD/SAVE]** button.

**Reference**
**A.** BGM (Background Music): 2.4.4
**B.** MOH (Music On Hold): 2.4.17

**Admin Programming**
■ Intercom Box Music Channel (PGM 171)

## 2.13.11 Station Feature Cancel

**Description**
The attendants can cancel features - such as DND, Call Forward and pre-selected messages - of other stations (refer to Ref. A, B, or C).

**Operation**
To disable active features at a station from the attendant:

1. Press the **[TRANS/PGM]** button.
2. Dial 0 7 1.
3. Dial the desired station range.
4. Press the **[HOLD/SAVE]** button.

**Reference**
**A.** DND: 2.4.9
**B.** Call Forward: 2.3.1
**C.** Pre-selected Message: 2.4.1.2

## 2.13.12 DSS/DLS Consoles

**Description**

Attendants and other DKTU may be equipped with DSS/DLS consoles which provide additional buttons for more convenient operation. The consoles are arranged as flexible mapped units. The DSS/DLS consoles are assigned with programming as one of the 3 maps. All buttons of any map are programmable.

The DSS/DLS consoles each require a separate line connection to the KSU, and take up a station number.

**Condition**

1. There is no limit to the number of DSS/DLS consoles in a system.
2. The default value for DSS/DLS is as follows:

| | |
|---|---|
| **MAP 1** | Flex 1 – Intrusion<br>Flex 2 – All Call Page<br>Flex 3 – Call Park 01<br>Flex 4 – Station Group 1<br>Flex 5 – Camp-on<br>Flex 6 – Internal All Call Page<br>Flex 7 – Call Park 02<br>Flex 8 – Station Group 2<br>Flex 9 – Group Call Pick-up<br>Flex 10 – External All Call Page<br>Flex 11 – Call Park 03<br>Flex 12 – Station Group 3<br>Station 100-135 |
| **MAP 2** | Station 136-147(ipLDK-20)<br>Station 136-83 (ipLDK-100/300/300E) |
| **MAP 3** | Empty(ipLDK-20)<br>Station 184-227(ipLDK-100)<br>Station 184-231(ipLDK-300/300E) |
| **MAP 4** | N/A : ipLDK-20/100<br>Station 232-279(ipLDK-300/300E) |
| **MAP 5** | N/A : ipLDK-20/100<br>Station 280-327 (ipLDK-300/300E) |
| **MAP 6** | N/A : ipLDK-20/100<br>CO line 01 – 48 |
| **MAP 7** | N/A : ipLDK-20/100<br>CO line 48 - 96 |
| **MAP 8** | N/A : ipLDK-20/100<br>CO line 97 - 144 |

**Admin Programming**

- Station ID Assignment (PGM 110 – FLEX 1)
- DSS/DLS ID Assignment (PGM 110 – FLEX 2)

# 2.14 ISDN Service

ipLDK system Basic Rate Interface (BRI) Integrated Services Digital Network (ISDN) circuits. The BRI provides two bearer channels and one data channel (2B+D).

Calling Number and Called Number services are supported. Calling Number services will be routed in the same way as Automatic Number Identification (ANI) calls using the DID route table.

The rules and conditions of ANI are the same, and still apply to Calling Number service on ISDN lines. Called Number services will be routed using the DID route table. The rules and conditions of DID and still apply to ISDN Called Number service on ISDN lines.

- The bearer channels (B channels) transport voice information to and from the Central Office.
- The data channel (D channel) controls all signaling information for the bearer channels.

## 2.14.1 Call Deflection/Rerouting

**Description**
ipLDK system is supporting ISDN-SS-CD/CR (ISDN Supplementary Service – Call Deflection/Rerouting). The protocol standard about CD/CR can be referred the ETS 300-202/204/205/206/207.

**Operation**
To activate ISDN-SS-CD/CR about CO lines, perform the following Steps:

1. In ADMIN program 143, enter the CO lines range for ISDN-SS CD/CR.
2. Press the FLEX button 9.
3. Set ISDN-SS CD or CR field value to ENABLE.

Station Off-net Call Forward at Station:

1. Press **[On/Off].**
2. Press **[DND/FWD].**
3. Dial **5** or **6.**
4. Enter the Speed Dial Bin.
5. Press the **[Hold/Save]** button.

***NOTE****—If there is an ISDN incoming call through the CO line that sets ISDN-SS CD/CR ADMIN PGM 143–FLEX9, then the call deflection/rerouting request message is sent with the station number saved in the speed dial bin to use the new divert destination.*

**Condition**
1. This feature can be used within only the ISDN network that supports ISDN-SS CD/CR service.

**Admin Programming**
- ISDN-SS Call Deflection/Rerouting (PGM 143 – FLEX9)

## 2.14.2 CLI (Calling Line Identification Presentation)

**Description**
The term of CLI is the telephone number of caller. By using of this, ipLDK station user can recognize the incoming CO caller's information and send the telephone number of the caller when he make an outgoing CO call.

### *2.14.2.1 Incoming CLI Service*

**Description**
When a station of ipLDK system receives an incoming CO call that has a telephone number of the caller, the station user can see the telephone number of incoming CO caller on LCD of station.

The Figure 2.14.2.1 describes an example of incoming CLI process in ipLDK system. In the figure, the outside CO caller defines the CALLING PARTY, and the station of ipLDK system defines the called party. The calling party makes a call to ipLDK system and ipLDK system receives the CLI of this call as '04318502824'. At first step, ipLDK system check whether the start digits information is matched with the MY AREA CODE (ADMIN program 200 – FLEX 9). In this example, my area code of '0431' is matched with the incoming CLI. So, ipLDK system is removing '0431' automatically from CLI data, and the rest CLI data is sent to the called party, station 100. The station 100 displays the incoming CLI '8502824' on the LCD, if the ADMIN program of CLI display is set to ON(see Operation.1). If the station 100 has the same speed dial data as the incoming CLI data '8502824', then the matched speed dial data name can be displayed on LCD according to the ADMIN program of CLI NAME DISPLAY.

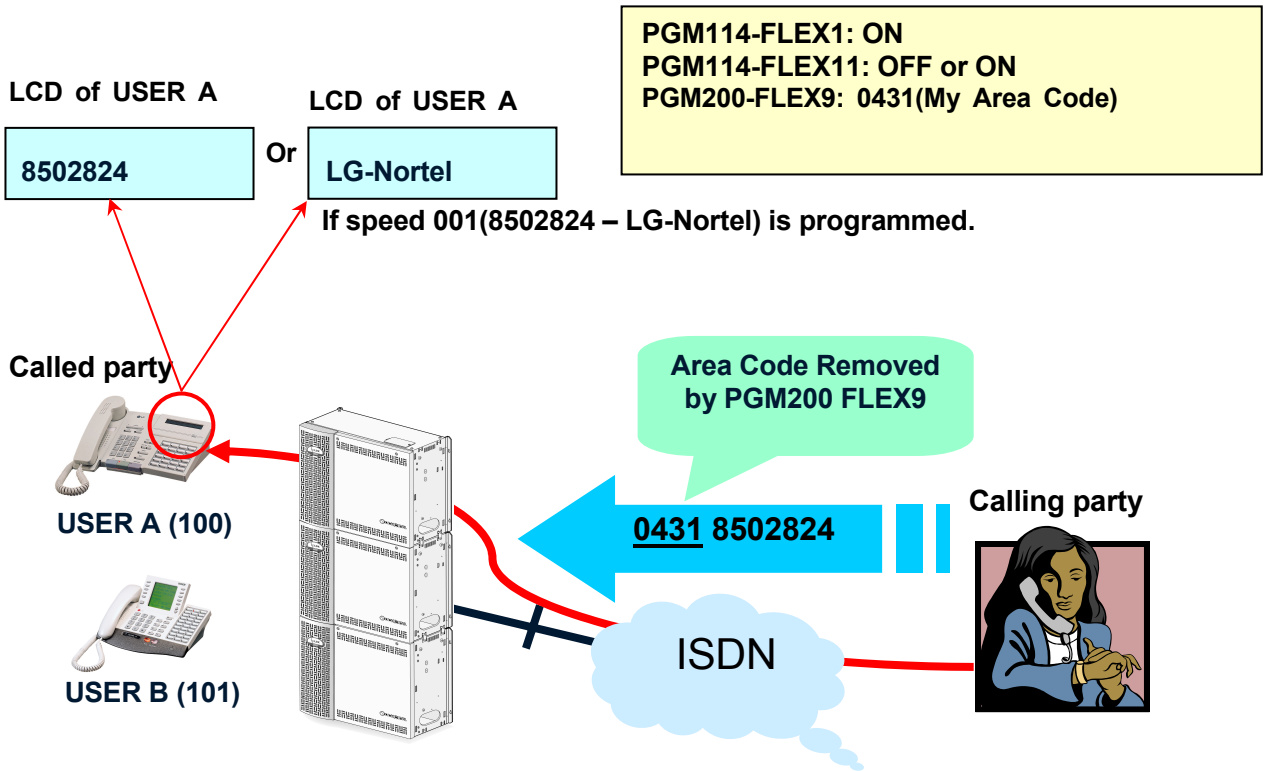



**Figure 2.14.2.1 incoming CLI process**

**Operation**
In ipLDK system, the various operations about the incoming CLI is provided according to the ADMIN program setting.

- If the CLIP DISPLAY (ADMIN program 114 – FLEX 1) is set to ON, the incoming CLI is displayed on station LCD.
- If the CLI NAME DISPLAY (ADMIN program 114 – FLEX 11) is set to ON, the incoming CLI digit display can be replaced to the matched station speed dial data name.
- If the CLI print (ADMIN program 200 – FLEX 6) is set to ON, the incoming CLI can be printed to RS-232C port.
- If the MY AREA CODE (ADMIN program 200 – FLEX 9) is set, and this value is matched with the start digits of the incoming CLI, then the matched digits are removed automatically.
- If the MY AREA PREFIX CODE (ADMIN program 200 – FLEX 10) is set, it can be used at the operation 4 with combination of MY AREA CODE.
- If the CLI MESSAGE WAIT (ADMIN program 114 – FLEX 4) is set to ON, the unanswered CLI data will be save at the station memory (refer to Ref. A)

**Condition**
- Up to 12 digits will be displayed on DKTU as a CLI number.
- Though the power of system is off, the stored CLI messages are not erased.
- The CLI can be shown at SLT which has a CLI display LCD. But secondary SLT of 2B DKTU can't display CLI information.

**Reference**
**A.** CLI Message Wait: 2.14.2.3

**Admin Programming**
- ■CLIP LCD Display (PGM 114 – FLEX 1)
- ■CLI Name Display (PGM 114 – FLEX 11)
- ■CLI Message Wait (PGM 114 – FLEX 4)
- ■CLI Print (PGM 200 – FLEX 3)
- ■My Area Code (PGM 200 – FLEX 9)
- ■My Area Prefix Code (PGM 200 – FLEX 10)

### *2.14.2.2 Outgoing CLI Service*

**Description**
When a station of ipLDK system makes an outgoing CO call, it can send the telephone number.

Figure 2.14.2.2 describes an example of outgoing CLI process in ipLDK system. In the figure, the outside CO caller is defined the called party, and the station 100 of ipLDK system is defined the calling party. The calling party, station 100, makes an outgoing CO call to the called party, and ipLDK generates the CLI of station 100 and transmit it to the called party.

For example, the CLI of station 100 is '04313283100'. This CLI data is combined with three parts. The start digits of CLI are '0431'; it is generated from the My Area Code feature (PGM 200 – FLEX 9). The insertion/omission of this value is managed by the Call Type setting (PGM 143 – FLEX 3). The end digits of CLI are '100'; it is generated from the ISDN CLI of station (PGM 114 – FLEX 12). At default, this ADMIN value is set as the same value as the station number. The middle digits of CLI are '3283'; it is generated from the CLIP/COLP Table value of CO line (PGM 201, and 143 – FLEX 2).

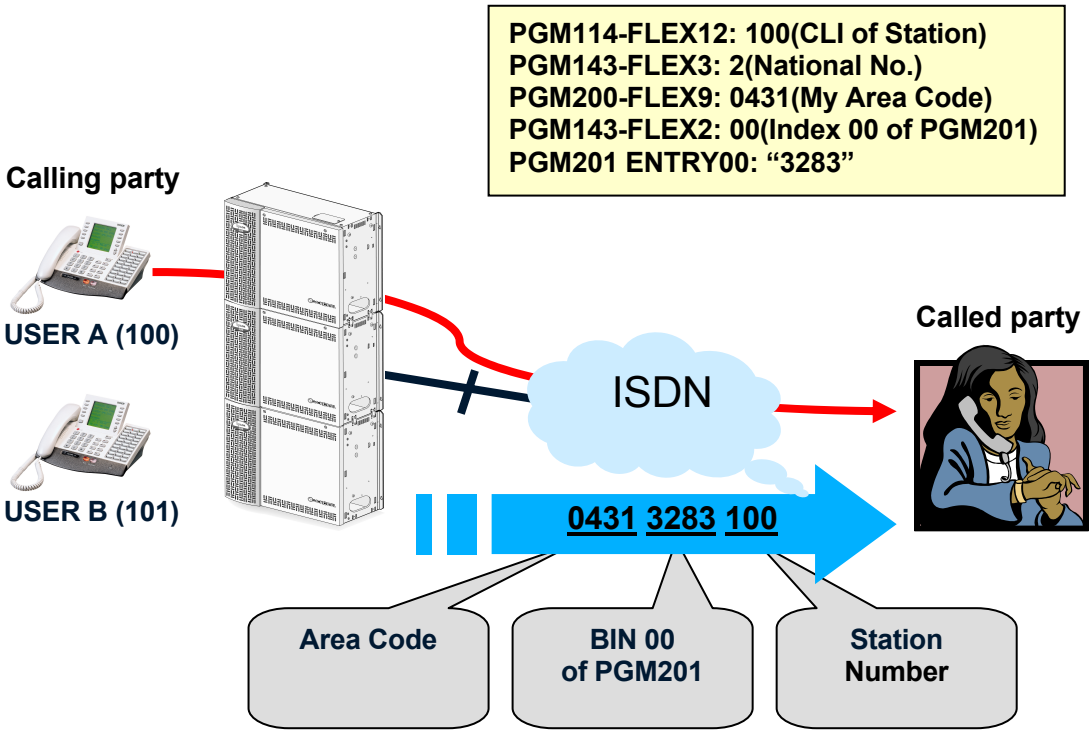



**Figure 2.14.2.2 outgoing CLI process**

### Operation

In ipLDK system, if the Call Type setting (PGM 143 – FLEX 3) is set to NATIONAL, the outgoing CLI is generated as illustrated figure 2.14.2, according to the ADMIN program setting.

- If the ISDN CLI of STATION (PGM 114 – FLEX 12) is set, this value is used as the end part of CLI when the outgoing CLI is generated.
- If the MY AREA CODE (PGM 200 – FLEX 9) is set, and this value is used as the first part of CLI when the outgoing CLI is generated.
- If the entry of CLIP/COLP TABLE (PGM 201) is set, and if the CLIP TABLE INDEX (PGM 143 – FLEX 2) is set to the front entry number, then it can be used as the middle part of CLI when the outgoing CLI is generated.
- If the CLI RESTRICTION (PGM 114 – FLEX 14) is set to ON, CLI transmission is restricted.

### Condition

- Though the System power is OFF, the stored CLI messages is not erased.

### Admin Programming

- CLIP/COLP Table (PGM 201)
- CLIP Table Index (PGM 143 – FLEX 2)
- Call Type (PGM 143 – FLEX 3)
- ISDN CLI of STATION (PGM 114 – FLEX 12)
- ISDN CLIR (PGM 114 – FLEX 14)
- My Area Code (PGM 200 – FLEX 9)
- My Area Prefix Code (PGM 200 – FLEX 10)

*2.14.2.3 CLI Message Wait*

**Description**

When a call exists through ISDN DID line, calling line identification (CLI) of the incoming call will be displayed on the LCD of the station. And if the DID external party hangs up before an Attendant or called station answer, the CLI provided by the digital network will be stored in the CO message wait queue of the original called station.

**Operation**

**CLI message wait feature summary**

| [CALLBK] | None | Retrieve CLI message |
|---|---|---|
| | **[VOL UP/DOWN]** | See next CLI message. |
| | **[HOLD]** | Make a recall according to CLI message. |
| | **[CALLBK]** | Toggle CLI message and SPEED Name. |
| | **[SPEED]** + Bin# + **[CONF]** | Store CLI message in SPEED dial bin. |
| | **[CONF]** | Delete current CLI message. |
| | **[DND]** | Delete all CLI message. |
| | At ATD: **[TRANS/PGM]**+055 | Delete all CLI message at ATD station. |

To activate CLI Message Wait, perform the following Steps:

1. CLIP should be programmed as ON (1).
2. The message contents will be shown on LCD.

```
MSG: CLI(3)
```

To retrieve a CLI Message:

1. Press **[CALLBK]** button.
2. The message contents (CLI number, date and time, the calling count from the same CLI) will be shown on the LCD. According to admin date LCD display format, the DATE will be display as MM/DD or DD/MM. TIME is always displayed in 24-hour mode.

```
03434507902
DATE TIME   CNT:xx
```

To delete the current CLI Message and see the next one:

1. Press **[CONF]** button.
2. The Station User can see the next CLI message and the current CLI message will be deleted.

To delete all CLI messages:

1. Press **[CALLBK]** button.
2. Press **[DND]** button and **[HOLD]** button.

To initiate a call back::

1. Press **[HOLD]** button.
2. The System will secure an available CO line in the first accessible CO group and dial it similar to speed dialing.

To see the next or previous CLI message:

1. Press the **[UP/DOWN]** keys.

To delete all CLI messages at Attendant:

1. Press the **[TRANS/PGM]** button.
2. Dial 055
3. Dial the Station range.
4. Press **[HOLD]** button.

To program the SPEED BIN number with CLI message:

1. At the retrieve CLI message LCD, press the **[SPEED]** button.
2. LCD display message changes as a usual station speed dial program, except that it displays the CLI message using an indication.

| |
|---|
| ENTER SPEED BIN NO(001)<br>CLI MSG USED |

3. The User can press a Station speed bin number,
   OR
4. Press the **[HOLD/SAVE]** button.
5. After entering the speed bin number, CLI message using indication is displayed onto speed dial digit position. It means that CLI can be entered pressing **[CONF]** button. If user wants to assign the CO for speed, it must be prior to **[CONF]** button pressing.

| |
|---|
| CLI MSG USED<br>ENTER CO-BTN/DIGIT(001) |

6. Press the **[HOLD/SAVE]** button to store the speed dial number.

**Condition**

- CLI display works about any type of co service, if co line is ISDN. But CLI message wait only works about DID/MSN co service type of ISDN line.
- The total number of CLI message wait is 500 in ipLDK-20 (2000 in ipLDK-100/300/300E (on System base)
- Station without LCD can not receive CLI message wait even though CLIP is set to ON.
- CLI messages are saved against power failure.
- When the call is routed to Ring Group, CLI Message is waited only the first member of Ring Group.
- When the call is routed to a member of UCD/ Circular/ Terminal station group, the CLI Message Wait will be provided to the first ringing station.
- If the external party releases the line during the VMIB announcement, the CLI Message Wait is not saved to any stations. But the external party release the line during that a station is ringing after the VMIB announcement, the CLI Message Wait will be remained at the first ringing station.
- Though the call is routed to the station (A) that is forwarded to the other station(B), the CLI Message Wait is provided to the original station(A). The basic rule for CLI Message Wait follows the rule of “Message Wait” feature.
- If there is no buffer, following warning message will be printed out through RS-232C.
  “WARNING: CLI MESSAGE WAITING BUFFER FULL”
- If the CLI number is programmed in the SPEED BIN No. Table with the “name” and the CLI name display ADMIN programmed, then the name will be displayed in the LCD. The CLI number and CLI user name is toggled by pressing **[CALLBK]** button.
- When a user try to delete the all CLI message at his station and some VMIB voice message wait exist together with CLI message, the “all CLI delete” feature can not be activated. Because the priority of the message wait is as following:
  VMIB message wait -> CLI message wait -> VM Group message wait
- If the duplicated CLI messages are left at a station, LCD of the station will display the CLI message with the CLI duplicated counter (max 15) and the latest message left time.
- If CLI print admin program set, CLI and Station Number are printed through RS-232C port.

### *2.14.2.4 CLI Transit Service*

**Description**

When user try to make outgoing call, outgoing CLI can be changed through some specific situations. Outgoing CLI can be selected automatically, according to CLI Transit Option (PGM143 Btn7) and authorization code.

There ate two kinds of option in CLI Transit Type. First is Original type, seconds is forward type.
And also there are two kinds of supported Authorization Codes in LDK system:

| Password Type | ipLDK-20 | ipLDK-100 | ipLDK-300 | ipLDK-300E |
|---|---|---|---|---|
| Personal Passwords | 001-028 | 001-128 | 0001-0300 | 0001-0600 |
| System Passwords | 029-200 | 129-500 | 0301-1000 | 0601-2000 |

**Operation**

*1) Outgoing call through DISA line*

*When system receive DISA incoming call with CLI and then Outgoing call is made, outgoing CLI is selected through some specific cases*

*Original CLI can be provided to PSTN when it is allowed from PSTN.*

| Type of CLI for DISA call | DISA Account | Type of entered password | CLI provided to PSTN |
|---|---|---|---|
| CFW | ON | Personal Password | CLI of Station which password is attached to<br>In UK and Sweden, CO Access is not allowed. |
| CFW | ON | System Password | CLI of Attendant |
| CFW | OFF | Without Authorization | CLI of Attendant |
| ORI | ON | Personal Password | Original CLI of external caller (if it received) |
| ORI | ON | System Password | Original CLI of external caller (if it received) |
| ORI | OFF | Without Authorization | Original CLI of external caller (if it received) |

*2) Walking COS feature*

*CO Account feature (PGM141 Btn9)*

Forced Station Account feature (PGM112 Btn20)

LCR Password feature (PGM221 Btn6)

| Dialed Password | CLI provided to PSTN |
|---|---|
| System password | CLI of Attendant |
| Personal password | CLI of Station which password is attached to |

*3) DID Destination is assigned to SPEED Bin.*

Incoming CO Off-Net CFWD.

| Type of CLI | CLI provided to PSTN |
|---|---|
| CFW | CLI of Attendant |
| ORI | Original CLI of external caller (if it received) |

**Admin Programming**

■CLI Transit Type (PGM 143 - Flex7)

## 2.14.3 CLIR/COLR

**Description**
CLIR (Calling Line Identification Restriction) & COLR (Connected Line Identification Restriction) are used, that calling party & called party inform to the public switching system, that they don't want to send their phone number to the other party.

If CLIR or COLR is requested, the PSTN restricts the transmission of CLI. If CLIR is set to ON, calling party number is not sent to the called party. If COLR is set to ON, the connected party number is not sent to the calling party.

**Admin Programming**
- ISDN CLIR (PGM 114 – FLEX 14)
- ISDN COLR (PGM 114 – FLEX 15)

## 2.14.4 COLP (Connected Line Identification Presentation)

**Description**
COLP is the same service as CLI, except that the transmitted information is the telephone number of the answered party.

**Admin Programming**
- COLP LCD Display (PGM 114 – FLEX 2)
- ISDN COLR (PGM 114 – FLEX 15)
- COLP Table (PGM 201)
- COLP Table Index (PGM 143 – FLEX 1)

## 2.14.5 Key Pad

**Description**
The ipLDK system supports the key pad dialing feature. The key pad facility dialing is the feature that the dialed digit information is sent through the key pad facility IE (Information Element) instead of the called party IE. The key pad facility dialing is executed when pressing the programmed flexible button as **{Keypad Facility}**.

**Operation**
1. When pressing the programmed **{Keypad Facility}** flexible button after seizing a CO line (ISDN), the system will send the dialed digits as Keypad Facility IE instead of Called Party Number IE in INFORMATION message to the network.
2. When a ISDN terminal user sends "#" using Keypad Facility IE with subsequent digits after seizing a CO line (ISDN), the system will send all dialed digits as Keypad Facility IE to network even if the codes are matched with internal supplementary service code (Ex. "*#" to hold CO line).
3. Keypad Facility IE Sending will be stopped automatically, when user releases the CO line (ISDN), or pressing the programmed **{Keypad Facility}** flexible button during dialing digits.

To assign **{Keypad Facility}** flexible button, perform the following Steps:

1. Press **[TRANS/PGM]**.
2. Press the FLEX button to be assigned.
3. Press the **[TRANS/PGM]** button.
4. Dial 8 9.
5. Press the **[HOLD/SAVE]** button to accept changes.

**Condition**

- The Keypad Facility Access Authority (ADMIN program 114 – FLEX 6) should be set to ON to use this feature.
- This feature can be activated by pressing the **{Keypad Facility}** flexible button after seizing an ISDN CO line.
- When this feature is activated, the system starts to send Keypad Facility IE instead of Called Party Number IE regardless of CONNECT message from the network unless pressing **{Keypad Facility}** button to deactivate it. So the system will continue to send Keypad Facility IE instead of DTMF tone even after CONNECT message is received from the network.
- If the Speed Dial is stored with **[FLASH]** as the first digit for ISDN line and the station has the Keypad Facility Access authority, the digits after **[FLASH]** command will be sent as Keypad Facility and the feature will be deactivated after sending all digits.
- When any of the following features are encountered after the Keypad Facility is activated, the feature will be deactivated automatically;
- Pressing function keys as [REDIAL], [TRANS/PGM], [FLASH], [HOLD/SAVE], [CONF]
- Pressing CO keys as CO, CO Group, Loop
- Pressing Flex. Buttons assigned some features as **{SPEED}**, **{DSS}**, **{Call Park}**, **{Keypad Facility}**

1. While On-hook

- This feature may not be operated depending on the services that require handling two call references at the same time after B channel connection is made as Hold & Retrieving, Conference, etc.
- The Speed Dial Numbers started with **[FLASH]** (display “D”) send saved digits as Keypad Facility IE instead of Called Party Number IE. After sending all Speed Dial Numbers, this feature is deactivated automatically.
- When the system receives a Called Party Number IE during sending Keypad Facility IE, the system will stop sending the Keypad Facility IE.
- “#” is not printed or saved in SMDR information when sending Keypad Facility IE.

**Admin Programming**

■Keypad Facility Access (PGM 114 – FLEX 6)

## 2.14.6 Malicious Call ID

**Description**
ipLDK system is supporting ISDN-SS-MCID (ISDN Supplementary Service – Malicious Call ID). The protocol standard about MCID is referred to in the EN300-130.

**Operation**
To program a MCID Request button at a Station, perform the following:

1. Press **[Trans/PGM].**
2. Press the FLEX button.
3. Dial * 0.
4. Press the **[HOLD/SAVE]** button to accept changes.

To use the programmed MCID Request button:

1. A station answers an incoming ISDN call.
2. While the Station is on the call or receiving a disconnect tone, press the **[MCID]** button.
3. ipLDK system sends MCID request message to the central office.
4. According to MCID return message value, the ipLDK System provides a confirmation tone in the case of success, or a congestion tone in the case of failure.

Save and Print Out the MCID Request Result:

1. The result of a MCID request is printed as SMDR print data (MT is printed for successful entries, and MF for failed entries).
2. If SMDR save ADMIN program is enabled, MCID result is also saved.

**Condition**
- It can be used within only ISDN network that supports ISDN-SS MCID service.

**Admin Programming**
- Refer to **ipLDK Installation Manual**, MCID Request Code (PGM 109)

## 2.14.7 MSN/Sub-Addressing

**Description**
When several ISDN devices are connected to a single ISDN port, the numbering method of each station is as follows;

**MSN (Multiple Subscriber Number)—**MSN provides the possibility for assigning multiple ISDN numbers to a single interface. It allows dialing from a line connected to a public network directly to terminals connected to a basic access which has subscribed to MSN number. The figure 2.14.3 describes the flow chart of MSN call process in ipLDK system.

**Sub-Addressing**—Sub-addressing allows the called user to expand his addressing capacity beyond the one given by the ISDN number.

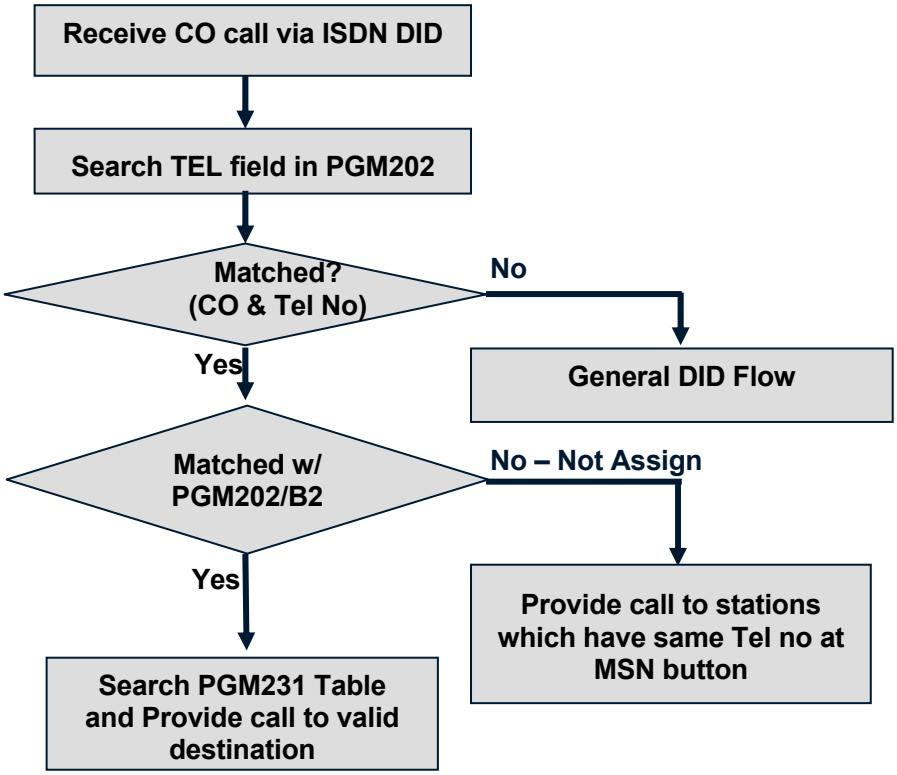



**Figure 2.14.7 MSN Call Process**

### Condition

- To use an ISDN line as MSN, the CO Service type should be set to DID/MSN.
- The MSN can be assigned up to 250 ISDN numbers with MSN table.
- MSN is carried from PX in CPN IE (Called Party Number Information Element).
- If the received CPN is not matched with MSN table, the call will be operated as DID.
- If a MSN call is received with an ISDN CO line and there are MSN table entries filled with the CO field value, then only the MSN table entries of MSN CO programmed will be searched. But, if there is no MSN table entry filled with the CO field value, then all MSN table entries will be searched.
- Max. 8 devices can be connected to a S0 part. It is required to have individual ISDN terminal power feeding to use them.
- The sub-address is carried from PX in CPSN (Called Party Sub-address Number) IE.
- Only one digit (0~9) can be used for sub-addressing.

### Admin Programming

- CPN Type (PGM 114 – FLEX 8)
- S0 Sub-address using Type (PGM 114)
- ISDN Calling Sub-address (PGM 200)
- MSN Table (PGM 202)
- Flexible DID Table (PGM 231)

## 2.14.8 ISDN Supplementary

### *2.14.8.1 ETSI Conference*

***ipLDK-20 Only***

**Description**

The ISDN Supplementary Service ETSI Conference (ISDN-SS-EC) feature allows the user to make a 3 party conference using one ISDN B channel.

**Operation**

To initiate a 3-party conversation, perform the following Steps:

1. Press the **[FLASH]** button, then the **[CONF]** button while on an ISDN broker call (one call should be on hold, and another call should be active).
2. Both calls should be active in a 3-party conversation or conference call.

To place a call on hold while engaged in a 3-party conversation:

1. Press the **[FLASH]** button.
2. Press the **[HOLD]** button.

**Condition**

- Only ETSI protocol is implemented.
- **[FLASH]**, **[HOLD]** and **[CONF]** or **{SUPP HOLD}**, **{SUPP CONF}** keys are needed for this feature.
- **{SUPP CONF}** key can be made by pressing the Code **[TRANS/PGM]** + * + 7 +**[HOLD]**

**Related Standards**

- EN 300-196-1 ( Integrated Services Digital Network (ISDN); Generic functional protocol for the support of supplementary services)
- EN 300-188-1(3 PTY Supplementary service)

*Call Barring - ATD only*

***ipLDK-20 Only***
***(CFU, Italy national protocol)***

**Description**
This feature enables the adjustment of the COS (Class of Service) of ISDN CO lines in ipLDK-20. The COS can be changed from C5 (all outgoing calls are possible), to C2 (outgoing calls only for specific numbers) and vice versa.

| ITEM | FEATURE CODE | REMARK |
|---|---|---|
| Call Barring Code | **[FLASH]** + 20 | National only |

***NOTE**—Flexible button programming is available.*

**Operation**
To decrease COS from the Attendant Station, perform the following Steps:

1. Press the **{CO}** key.
2. Press the programmed key for **{Call Barring}**,
   OR
3. Press **[FLASH]** key + 2 0.
4. Call service will be accepted and/or rejected by PX and display during off- hook state (Or service rejected and/or rejected by PX and display during off- hook state).
5. The Call barring key and **{CO}** Key will be illuminated, and the LED will flash (50 IPM).

To increase COS from the Attendant Station:

1. Press the **{CO}** key.
2. Press the programmed key for **{Call Barring}**,
   OR
3. Press the **[FLASH]** key + 2 0.
4. Dial the password code to increase the COS.
5. Service will be accepted and/or rejected by PX and display during off- hook state.
6. When an Attendant station goes to on-hook state, if the COS is restored to C5 then the feature key LED goes off and the normal LCD message will be displayed. But, if COS is not restored to C5 (Reject case), then the LCD remains as before (**{CO}** Key and feature key flashing at 60 IPM).

**Condition**
- This feature is only available in National Keypad Protocol.
- Password code for Call Barring can not be programmed to a flexible button; the User will always need to dial the code.
- This feature is supported only on an access basis; only an Attendant Station can activate this feature. If a non-Attendant Station attempts to activate this feature, an error tone will be heard.
- The **{Call Barring}** key has toggle functionality (class up/down).
- If activated, ISDN CO line COS will change according to service type (class up/down).
- When the COS is changed to C2 state, the services available in all ISDN co lines depend on the PX.

### *2.14.8.3 Call Forward Unconditional – ATD only*

***ipLDK-20 Only***
***(CFU, Italy national protocol)***

**Description**
This feature is used to reroute (forward) a specific CO Line Call to another subscriber number.

PX will transfer a predefined specific subscriber's CO line call to another subscriber number according to CO line/subscriber number.

| ITEM | Feature Code | REMARK |
|---|---|---|
| CFU Activation Code | **[FLASH]** + 22 | National only |
| CFU Deactivation Code | **[FLASH]** + 23 | |

***NOTE**—Flexible button programming is available.*

**Operation**
To activate Call Forward Unconditional (preprogrammed flexible button only):

1. Press the **{CO}** key.
2. Press the programmed key for **{CFU Activate with Destination}**,
   OR
3. Press **[FLASH]** key + 2 2.
4. Service will be accepted by PX and the LCD will display as during off-hook state (or when service is rejected by PX then the LCD will display as during off-hook state).
5. When the station goes on-hook, the feature key LED and **{CO}** key LED will flash at 30 IPM (when rejected, the normal LCD will be displayed and feature key LED goes idle).

To deactivate Call Forward Unconditional:

1. Press the **{CO}** key.
2. Press the programmed key for **{CFU Activate with Destination}**,
   OR
3. Press the **[FLASH]** key + 2 3.
4. Service will be accepted by PX and the LCD will display as during the off-hook state (**{CO}** key and feature key LED will be idle). When service is rejected by PX then the LCD will display as during an off-hook state.
5. When the station goes on-hook, the feature key LED and **{CO}** key LED will go idle (when rejected, the normal LCD will be displayed and feature key LED does not change).

**Condition**

- This feature is only available in National Keypad Protocol.
- This feature can only activated by using a preprogrammed flexible button.
- If the CFU feature is activated, the **{CFU Activate with Destination}** key LED will flash at 30 IPM.
- This feature is supported only on an access basis; only the Attendant Station can activate this feature, if another Station attempts to activate this feature, an error tone will be heard.
- If this feature is activated, incoming CO Calls will be unconditionally transferred to the predefined destination.

*2.14.8.4 Memo Tel*

***ipLDK-20 Only***
***(CFU, Italy national protocol)***

**Description**
Memo-Tel is a feature used for transferring incoming CO Calls to the MSG Storage System of the PX when the CO Line is busy or there is no answer. This feature can be selectively activated for normal cases (busy or no answer), or only for no answer calls. The User can check messages left in the PX.

| ITEM | Feature Code | REMARK |
|---|---|---|
| Memo Tel Normal Deactivation Code | **[FLASH]** + 24 | National only |
| Memo Tel Normal Activation Code | **[FLASH]** + 25 | |
| Memo Tel Timer Code | **[FLASH]** + 26 | |
| Memo Tel Activation only LNR2) | **[FLASH]** + 27 | |
| Memo Tel Interrogation of service status | **[FLASH]** + 28 | |
| Memo Tel Interrogation of MSRS3) | **[FLASH]** + 29 | |

***NOTE****—Flexible button programming is available.*
**LNR: Idle No Answer**
**MSRS: Message Storage and Retrieve System.**

**Operation**
To activate Memo-Tel from an Attendant Station, perform the following Steps:

1. Press the **{CO}** key.
2. Press the programmed key for **{MEMO-TEL Activation Normal}**,
   OR
3. Press the **[FLASH]** key + 2 5 (Normal Activation).
4. Service will be accepted by PX and display as during off-hook state (or service will be rejected by PX and display as during off-hook state).
5. When the station returns to an on-hook state the normal LCD will be displayed.

To change Memo-Tel Timer:

1. Press the **{CO}** key.
2. Press the programmed key for **{MEMO-TEL Timer Code}**,
   OR
3. Press the **[FLASH]** key + 2 6 (Change Timer).
4. Service will be accepted by PX and display as during the off-hook state (or service will be rejected by PX and display as during the off-hook state).
5. When the station goes on-hook, the normal LCD will be displayed.

To deactivate Memo-Tel:

1. Press the **{CO}** key.
2. Press the programmed key for **{MEMO-TEL Deactivation}**,
   OR
3. Press the **[FLASH]** key + 2 4 (Normal Deactivation).
4. Service will be accepted by PX and display as during the off-hook state (or service will be rejected by PX and display as during the off-hook state).

To check the current state of Memo-Tel service:

1. Press the **{CO}** key.
2. Press the programmed key for **{MEMO-TEL Interrogation Code}**,
   OR
3. Press the **[FLASH]** key + 2 8.

4. Service will be accepted by PX and an announcement about the current memo-tel activation type and applied timer will be heard (or service will be rejected by PX and an announcement about wrong access will be heard).
5. When the station returns to an on-hook state, the normal LCD will be displayed.

To retrieve messages left in Memo-Tel MSRS:

1. Press the **{CO}** key.
2. Press the programmed key for **{MEMO-TEL Retrieve MSRS Code}**,
   OR
3. Press the **[FLASH]** key + 2 9.
4. An Enter Password announcement will be heard (or if rejected, the wrong access announcement will be presented).
5. Dial the Password (4 digits) + the # key.
6. Dial the appropriate access code as detailed by the PX announcement.

**Condition**

- Memo-Tel is only available in National Keypad Protocol.
- When activated by the Attendant Station, ISDN lines will be in Memo-Tel mode; the Attendant can retrieve MSRS messages or check the status of the system for all ISDN lines.
- When activated by a non-Attendant Station (number basis), the first CO line registered to the Station according to the MSN table will be in Memo-Tel mode. The User should be assigned with the specific subscriber number and CO number to MSN table. If no CO number is assigned to MSN table, the System will choose the first available CO as default.
- To retrieve stored messages or check service status at the Station, a CO line does not need to be accessed.
- User can check service status to PX using 'Interrogation of Service Status' service.

## 2.14.9 DID Call Destination with Incoming CLI

**Description**

DID incoming CO call destination can be assigned by incoming CLI. If some CLI number is registered at Incoming CLI Destination Table, all of DID call with these CLI will be routed to registered specific places.

ICLID Table (Incoming CLI Destination Table) has two fields, one is CLID field, and the other is Destination Index field. Destination Index field is represent index number of DID Conversion Table (PGM 231). If CLI from external call is matched with CLID field, this call will reference Destination Index field, and then look at registered destination of index from DID Conversion Table

**Operation**

To set Incoming CLI and Index Tables:

1. PGM237 and choose table number.
2. User can register CLI number at Button1
3. User can assign Index Table number at Button2.

Rerouting destination by Incoming CLI:

1. DID incoming call has own CLI
2. This call will be analyzed with ICLID Table.
3. If CLI of this call is matched registered CLI field then look up DID Conv. Table with saved index.
4. This call will be delivered some specific destination by ICLID Index Table.

**Condition**

- This feature is supported when only CO type is DID.
- This feature is executed first, when system receives DID call with CLI.

- ICLID Table is auto-sorted table. So when admin-user enters the CLI and Conv Table index number, this field is saved automatically by sorted.
- If saved CLI number is same some previous field's CLI, system recognize this purpose is to change Conv Table index field.
- When admin-user erase CLI field, Conv.Table index will be erased.
- ICLID Table can be initialized by PGM450 F11 (Initialization Other Tables).
- If ICLID Usage option of CO line is off, this CO line will not be checked with ICLID tables. In other words, only CO line with ICLID Usage option ON, will be applied with ICLID feature. (PGM143-F18).
- User can register wild-card number "*" in CLI field. If "*" is registered, only registered numbers before the "*" will be check with received CLI number. And if all of numbers is matched before "*", this call will be handled by ICLID feature

**Admin Programming**

■ICLID Table (PGM 237)

# 2.15 VOIP Service

***NOTE**—Under certain operating conditions this equipment cannot be relied upon to make emergency calls. Alternative arrangements should be made for access to the emergency services.*

## 2.15.1 Call by IP address

**Description**
This feature is established by receiving IP numbers or dialing IP numbers directly.

**Operation**
To make an IP call by address, perform the following Steps:

1. Press the desired **{CO}** line, **{POOL}**, or **{LOOP}** button,
   OR
2. Dial the CO line or Group code
3. The dial tone should be heard, then dial the IP address (use the * key in place of where the dots "." of the IP address would be used). Ex., IP Address: 156.147.3.201, Dialed number:156*147*3*201)
4. Press the # button to place the call. If the Called Party is a User in the ipLDK System, ringing will follow the pre-defined Ring Assignment (PGM 144).

**Condition**

- When programming Speed Dial for Direct Call, the # key must not be used (ex., to assign 156*147*3*139 to Speed Dial, enter 156*147*3*139, and not 156*147*3*139#).
- In DISA incoming calls, CO access is denied if the line seized by dialing Co access
- Code is a VOIB line.

**Admin Programming**

- CO Line Service Type (PGM 140)
- VOIB IP Setting (PGM 340)

## 2.15.2 Call by Routing Table

**Description**
This feature is established by dialing Station numbers as programmed in the Network Routing Table (PGM 324)

**Operation**
To use the Call by Routing Table:

1. Dial the Station number (included in the range from start range to end range in Network Routing Table).
2. The System will select one VOIP CO line in the CO Group assigned in Network Routing Table.
3. The User will hear a Ring Back Tone if this call is possible.
4. In case of error, busy, or no answer, the call will follow the DID/DISA destination (PGM 167).

**Condition**

- For calls using the Network Table, VOIB calls follow the ISDN DID Call Procedure (DID Conversion Type, Digit Conversion Table, Flexible DID Table, etc.).
- VOIP CO calls do not follow the assigned Ring Assignment even if DID/DISA destinations are forwarded to the Attendant. The call will be transferred to the Attendant directly.
- If the Network Routing Table has more than one table entry that is the same routing number but the destination is different, the call will be routed to the default destination of the Network Routing Table.
- To transfer incoming calls to another system via VOIB, the User must not drop the call before hearing the Ring Back Tone.
- DSS, HUNT, VMIB, VMIB # and System Speed can be the destination for the Flexible DID Table (PGM 231).
- CLIP and COLP are not applied to VOIP CO Calls.

**Admin Programming**

- CO Line Service Type (PGM 140) –ISDN DID/MSN
- VOIB IP Setting (PGM 340)
- DID Conversion Type (PGM 143 – FLEX 4)
- Flexible DID Table (PGM 231) – (used in case of DID Conversion Type 2)
- Networking CO Group (PGM 322 – FLEX 1)
- Networking Routing Table (PGM 324)

## 2.15.3 Normal/Fast mode for H.323

**Description**
H.323 endpoints may establish media channels in a call using either the procedures defined in Recommendation H.245 or the "Fast Connect" procedure described in the below. The Fast Connect procedure allows the endpoints to establish a basic point-to-point call with as few as one round-trip message exchange, enabling immediate media stream delivery upon call connection.

The calling endpoint initiates the Fast Connect procedure by sending a **SETUP** message containing the **fastStart** element to the called endpoint. The **fastStart** element consists of a sequence of **OpenLogicalChannel** structures describing media channels which the calling endpoint proposes to send and receive, including all of the parameters necessary to immediately open and begin transferring media on the channels.

**Admin Programming**

- Normal/Fast Mode (PGM 340 - F18)

## 2.15.4 Early H.245

**Description**
The early H.245 option allows the H245 channel to be setup earlier, and hence speeds up the call setup. When early H245 is turned on, the H245 channel address is also supplied in the Setup message. This speeds up the call because the H245 channel negotiations can proceed in parallel to H225.

**Admin Programming**
- Early H.245 (PGM 340 - FLEX19 )

## 2.15.5 H.245 Tunneling

**Description**
Entities in the signaling path such as gatekeepers may perform functions such as divert on no-reply or other advanced call control that results in representing to an endpoint a Q.931 call state that is different from the actual call state at the other endpoint. Such intermediate entities shall ensure that H.245 messages encapsulated in Q.931 messages are forwarded to the other endpoint even if the Q.931 message in which the H.245 message is encapsulated would be consumed and not forwarded to the other endpoint. This is accomplished by transferring the encapsulated H.245 message into a **FACILITY** message with the **h323-message-body** set to **empty**. For example, if a gatekeeper has already sent a **CONNECT** message to a calling endpoint and later receives a **CONNECT** message from a called endpoint that contains an encapsulated H.245 message, it must forward the H.245 message using a **FACILITY** message.

**Admin Programming**
- H.245 Tunneling (PGM 340 - F20)

## 2.15.6 DiffServ

**Description**
In the IP Datagram, 8 bits are reserved to the Service type. These bits can be further broken into 5 subfields given below.

| 0 1 2 | 3 | 4 | 5 | 6 7 |
|---|---|---|---|---|
| PRECEDENCE | D | T | R | UNUSED |

The 3-precedence bits specify the datagram precedence varying from 0 to 7. This allows the senders to indicate the importance of each datagram. The TOS provides a mechanism that can allow control of information precedence over data. The other 3 bits represent the following:

**D** - requests low delay

**T** - requests high throughput

**R** - requests high reliability

The precedence bits (bits- 0,1,2) are significant in having an effect on load. So, we vary these bits and try to monitor the changes in the RTT (Round Trip Time) for varying loads.

At low loads, the traffic is not significant enough for the TOS to have any effect on the ping as the packets will get through anyway. Similarly at high loads, the TOS will not have an effect on the ping statistics but in this case there's too much traffic & there will be a significant amount of packet loss & elongated round trip times irrespective of the precedence set. Somewhere between these two extremes we expect to see a window where the TOS actually has an effect on the RTT/packet loss (high RTT/Packet loss at TOS=0 & low RTT/Packet loss at TOS=224).

Executing 'ping2' for different TOS with no load

The modified NIKHEF ping code was run from nereus.slac.stanford.edutonocdev1-qos.es.net with TOS: 0,32,64,96,128,160,192,224 & No TOS specification. The code was run for 10000 packets of each TOS. The TOS numbers represent the precedence bits as follows.

| PRECEDENCE | BITS(0,1,2) | TOS |
|---|---|---|
| 0 | 000 | 0 |
| 1 | 001 | 32 |
| 2 | 010 | 64 |
| 3 | 011 | 96 |
| 4 | 100 | 128 |
| 5 | 101 | 160 |
| 6 | 110 | 192 |
| 7 | 111 | 224 |

Precedence 0 (TOS 0) is NORMAL PRECEDENCE (low precedence) while precedence 7 (TOS 224) is called network control ( High precedence).

Since there is no load on the line, one would expect the TOS to have no effect on the ping statistics. Rightly so, we see from the chart that the obtained results are similar to the predicted results.

### Admin Programming

- Precedence value (PGM 340 - F21)

# 2.16 H.450 over IP

The ipLDK System supports H.450 over IP (Internet Protocol) networking. The Networking System can link telephone systems together so that they behave like a unified communication network, providing service transparency, cost-efficiency and adaptability to your organization's needs.

**Network Configurations**

The System can support various interconnected corporate network configurations via the Internet and up to 72 systems (including itself) can be combined on the network.

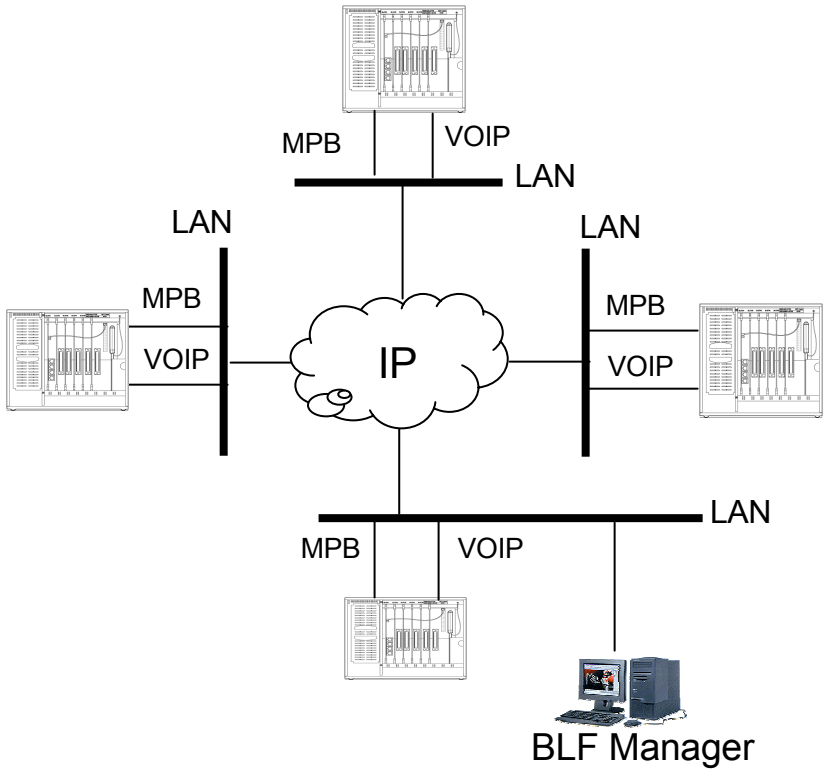



**Figure 2.16A H.450 over IP networking configuration (BLF manager)**

**Networking Protocols**

The ipLDK System can support H.450 over IP – for the basic networking functions and proprietary protocol for advanced networking functions.

- IP standard protocolH.323 for Call Control, H.450.1 - H.450.12
- LG-NORTEL CO. LTD. Proprietary protocol for advanced Function

**Requirements**

To use the networking features, software lock-key installation is required. Each ipLDK system has its own unique software lock-key. To get the software lock-key, contact the distributor of your ipLDK system.

**Numbering Plan**

**Unified Dialing Plan (UDP)**—In the ipLDK networking system, the UDP numbering plan is used. In the UDP networking, the stations of each system can have a unique station number from 2 digits up to 7 digits. The unique station number is assigned according to the numbering plan of each ipLDK system. The figure 2.16.2 describes the networking configuration that is configured by UDP numbering plan. In this figure, the symbol of 'x' represents the ranged digit as 0 - 9.

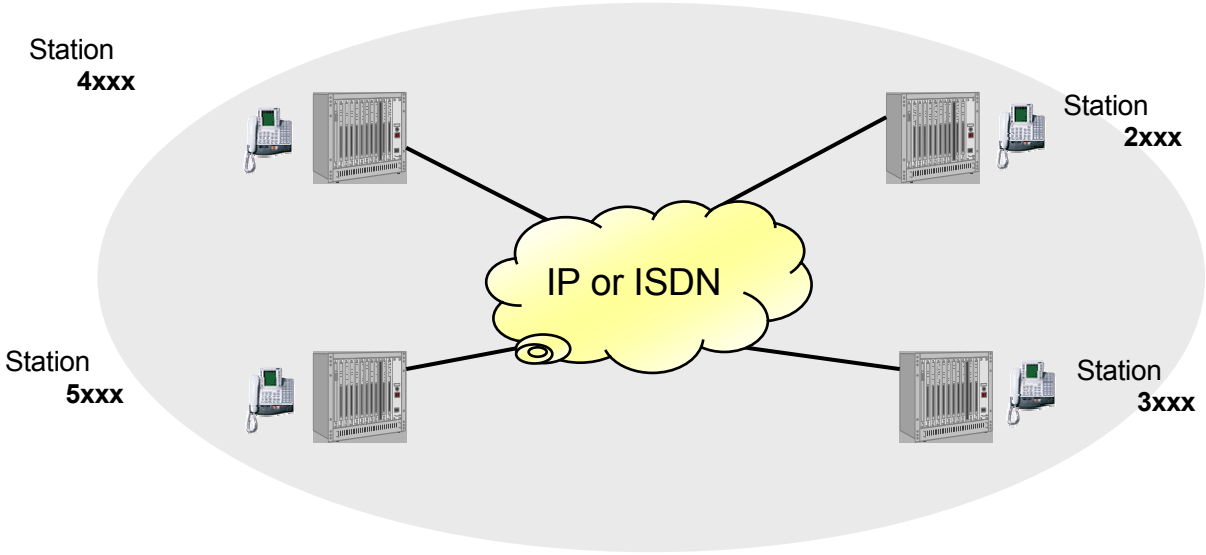



**Figure 2.16B Networking Configuration (UDP Numbering Plan).**

**Automatic Routing Service**

A dialed number is analyzed and routed to access the correct destination according to the Net Numbering Table. The System supports an alternative route when the main path fails. In order to maximize the use of Networking and efficiency of the private network, the Net Numbering Table provides a simple accessibility to the end User.

## 2.16.1 Net Call

**Description**

Net Call allows a Station User to make a call to a Station in another Networking System by dialing a Station number just as an intercom call would be dialed within the same System. The Figure 2.16.1 describes Net Call operation in the VOIP Networking connection.

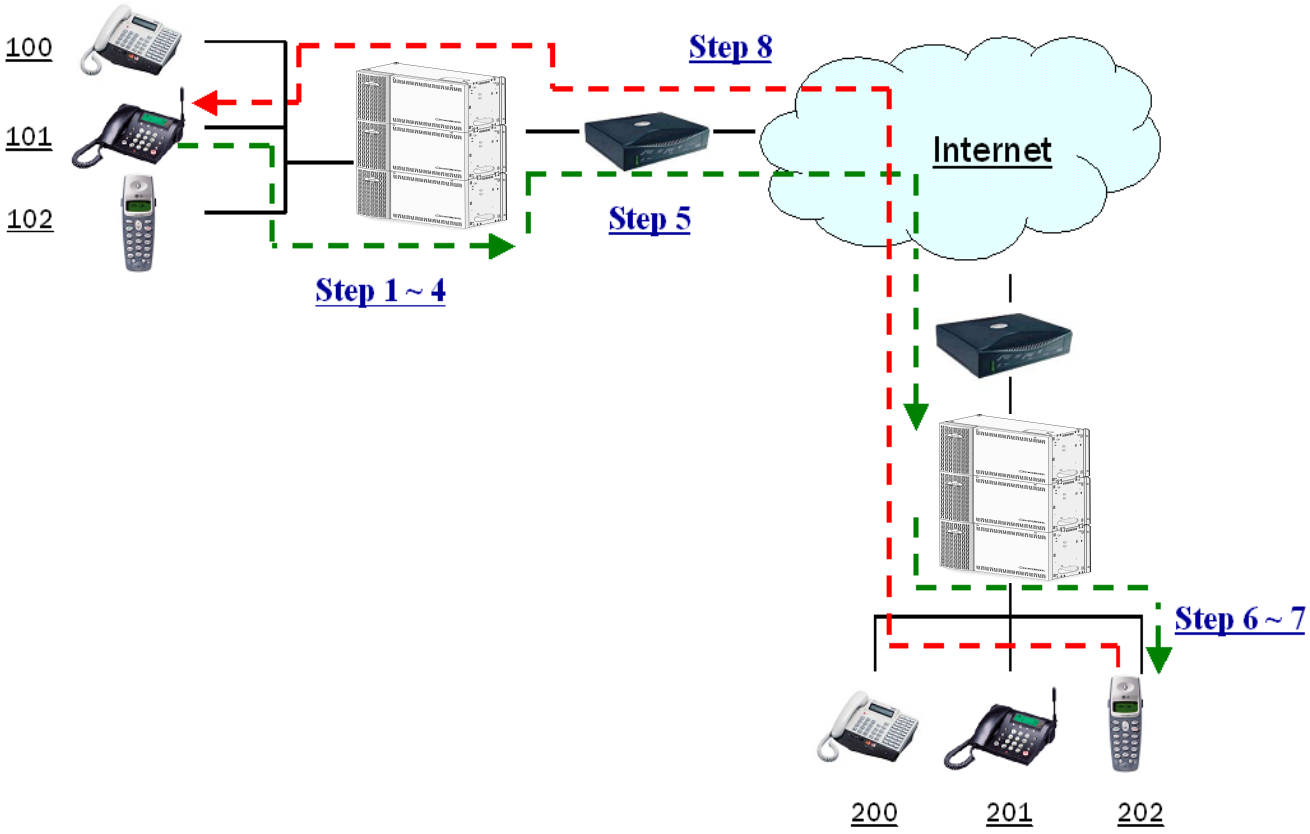



**Figure 2.16.1 Net call operation in VOIP networking connections**

**Call Flow**

| Step | Flow |
|---|---|
| 1 | Station 101 dials 202 that is a station number of other system. |
| 2 | System searches Networking Numbering Table. |
| 3 | 2** matches 202, (2** means '200 ~ 299') |
| 4 | System gets the destination IP address that is assigned for station 202. (For example 10.152.32.67 or 192.168.1.1) |
| 5 | VOIP net call goes to destination IP |
| 6 | Ringing at the exact destination (202) |
| 7 | Destination (202) answers |
| 8 | Conversation |

***NOTE**—During a conversation, all telephony features are available (ex., call transfer, hold, conference and etc.)*

**Operation**
To make a Net Call, perform the following:

1. Lift the handset or press the **[MON]** button; the dial tone should be heard.
2. Dial a Station number on another Networking System.
   OR
3. Press the **[NET DSS]** button.
4. The station will access a Network CO Line according to the Net Routing Table; the System will send a digit stream that is modified by the Net Routing Table.
5. The called System will receive a digit stream that is sent by the calling system, and will analyze it using the Net Routing Table to determine the right destination Station.
6. The call will ring at the destination Station.
7. The **[COL]** flexible button LED representing the CO line for the Net Call, will be extinguished when the Net Call is completed.

**Condition**
- To make a Net Call, as an Intercom call, the Station User must dial the destination Station number without seizing a CO line.
- After the Station User makes a Net Call, the ipLDK system will access an idle CO line to send the Net Call request to the destination Station. But if there is no selectable idle CO line, then the User will hear an error tone.
- A received Net Call will ring in the Terminal Answer Mode, regardless the Intercom answer mode setting (Hands-free/Terminal/Privacy).
- When system detects a fatal error from the Network, the System will send the digit stream to the Network using the alternate speed dial bin. In this case, the Call is not a Networking Call.
- The Net Call is also applied to the CO Call Restriction Timer (PGM 180-FLEX17).

**Admin Programming**
- Networking Basic Attributes (PGM 320)
- Networking CO Line Attributes (PGM 322)
- Network Routing Table - Numbering Plan (PGM 324)

## 2.16.2 VOIP Networking

**Description**
Two ipLDK Systems can be connected through the VOIB. The networking CO line connects the networking Systems and it is used for the network signaling message and voice path. To use the networking CO line, the service type must be set to DID/MSN at ADMIN program 140. And to receive the net call digit information correctly, the appropriate DID conversion type must be set at ADMIN program 143 – FLEX 4. In this example, DID TYPE 1 satisfies the situation. To configure the net CO line connection, the net CO group and type must be set to '01' and 'NET' at ADMIN program 322 – FLEX 1 & 4.

**At system A & B**

| PGM | RANGE | ITEM | VALUE |
|---|---|---|---|
| 140 | VOIB CO range | CO service type | DID/MSN (3) |

| PGM | RANGE | FLEX | ITEM | VALUE |
|---|---|---|---|---|
| 143 | VOIB CO range | 4 | DID conversion type | 1 |

| PGM | RANGE | FLEX | ITEM | VALUE |
|---|---|---|---|---|
| 322 | VOIB CO range | 1 | Net CO group | 01 |
| | | 4 | Net CO type | NET(1) |

**At System A**

| PGM | BIN | FLEX | ITEM | VALUE |
|---|---|---|---|---|
| 324 | 00 | 1 | System usage | NET(0) |
| | | 2 | Numbering plan code | 1#＊＊ |
| | | 3 | Numbering plan CO group | 00 |
| | | 4 | VOIP Called Party Information 1/2/3/4 | 0.0.0.0 |
| | 01 | 1 | System usage | NET(0) |
| | | 2 | Numbering plan code | 2＊＊ |
| | | 3 | Numbering plan CO group | 01 |
| | | 4 | VOIP CPN Information 1/2/3/4(note) | VOIB IP address of system B |

***NOTE**—At the ADMIN program – FLEX 4, maximum of 4 VOIP CPNs can be set. The reason of multiple VOIP CPN is to assign a different IP address per each VOIB, when the destination networking system has multiple VOIB.*

**At System B**

| PGM | BIN | FLEX | ITEM | VALUE |
|---|---|---|---|---|
| 324 | 00 | 1 | System usage | NET(0) |
| | | 2 | Numbering plan code | 2#＊＊ |
| | | 3 | Numbering plan CO group | 00 |
| | | 4 | VOIP Called Party Information 1/2/3/4 | 0.0.0.0 |
| | 01 | 1 | System usage | NET(0) |
| | | 2 | Numbering plan code | 1＊＊ |
| | | 3 | Numbering plan CO group | 01 |
| | | 4 | VOIP Called Party Information 1/2/3/4 | VOIB IP address of system A |

**Operation**

To enable the networking feature:

1. The PGM 320 – FLEX 1 must be set to ON at each System (if the networking lock-key is not installed, this ADMIN program can not be enabled).

To satisfy the UDP condition:

1. Flexible Station Numbering Plan (PGM 105) must be programmed at each System. At this ADMIN program, the Station number range of System A can be changed from 100 to 199 (100 - 199), and System B also can be changed from 200 to 299 (200 - 299).

***NOTE**—The changed Station numbers must not conflict with the flexible numbering plan code for each System.*

1. If system A has a flexible numbering code 2 as its Pick-Up code, then Station numbers that start with the digit 2, can not be used.

The destination IP address is needed to route:

- PGM 324 – FLEX 4 is used to set the IP address of the destination System's VOIB.
- Configure the VOIP Networking between System A & B as listed:
  At system A: Enter ADMIN program 105 + **[SPEED]** + 100 + 199 + **[HOLD]**
  At system B: Enter ADMIN program 105 + **[SPEED]** + 200 + 299 + **[HOLD]**

**Admin Programming**

- CO Service Type (PGM 140)
- ISDN CO Line Attributes - DID Conversion Type (PGM 143)
- DID Receive Digit and DID Digit Mask (PGM 146)
- Flexible DID Table (PGM 231)
- Networking CO Line Attributes - Group and CO Type (PGM 322)

## 2.16.3 Identification Service

**Description**
Between Networking Systems, a Station Name can be transmitted via the networking signaling messages.

Calling Name Identification Presentation (CNIP)—the name of a Station is transmitted when an outgoing call is made.

Connected Name Identification Presentation (CONP)—the name of station is transmitted when an incoming call is answered. If the opposite side Networking System is received the name of station, then it is displayed on LCD.

**Operation**

1. CNIP and CONP operation is executed whenever the station of networking system makes a call and it answers the incoming call.

**Condition**

1. To used CNIP and CONP service, the name of the Station and the related PGM 320 – FLEX 3 & 4 must be set properly.

**Admin Programming**

■ Networking CNIP and CONP Enable (PGM 320)

## 2.16.4 Net Transfer

**Description**
Net Transfer is used to transfer net calls. It can transfer any kind of call to a Station in another System by pressing the **[TRANS/PGM]** button and dialing the Station number. The operation of net transfer is the same as transferring a call (screened or unscreened) within the same System.

> ***NOTE****—There are two different kinds of standard net transfer signaling method: transfer by join and transfer by rerouting. The main difference is in the connecting path between the transferring, transferred, transferred-to Station controls.*

- Join—an additional connecting path is needed to transfer the call to another Station.
- Routing—a new connecting path is used to transfer the call (the old connecting path of transferring station will be cleared).

If both transfer by join and transfer by routing are supported by the System, the appropriate mode can be selected using PGM 321.

The Figure 2.16.4 describes the unscreened net transfer operation on the networking connection environment. At the first step, the outside caller dials the telephone number of Station 100. And Station 100 receives the incoming ring at the second step. At the third step, Station 100 answers and requests the call transfer to the Station 202 (located in another Networking System). To execute the net transfer, the Station 100 presses **[TRANS/PGM]** button and dials ‘202’. After hearing the ring back tone, Station 100 goes idle. Station 202 receives the net transfer ring and answers at the fifth step.

**Call Flow**

| Step | Flow |
|---|---|
| 1 | Outside Caller dials a station in the networking system |
| 2 | Call comes in, the station 100 receive a ring. |
| 3 | Station 100 answers and converse |
| 4 | Station 100 transfers the call to 202,and goes idle |
| 5 | Station 202 rings and answers |
| 6 | Conversation |

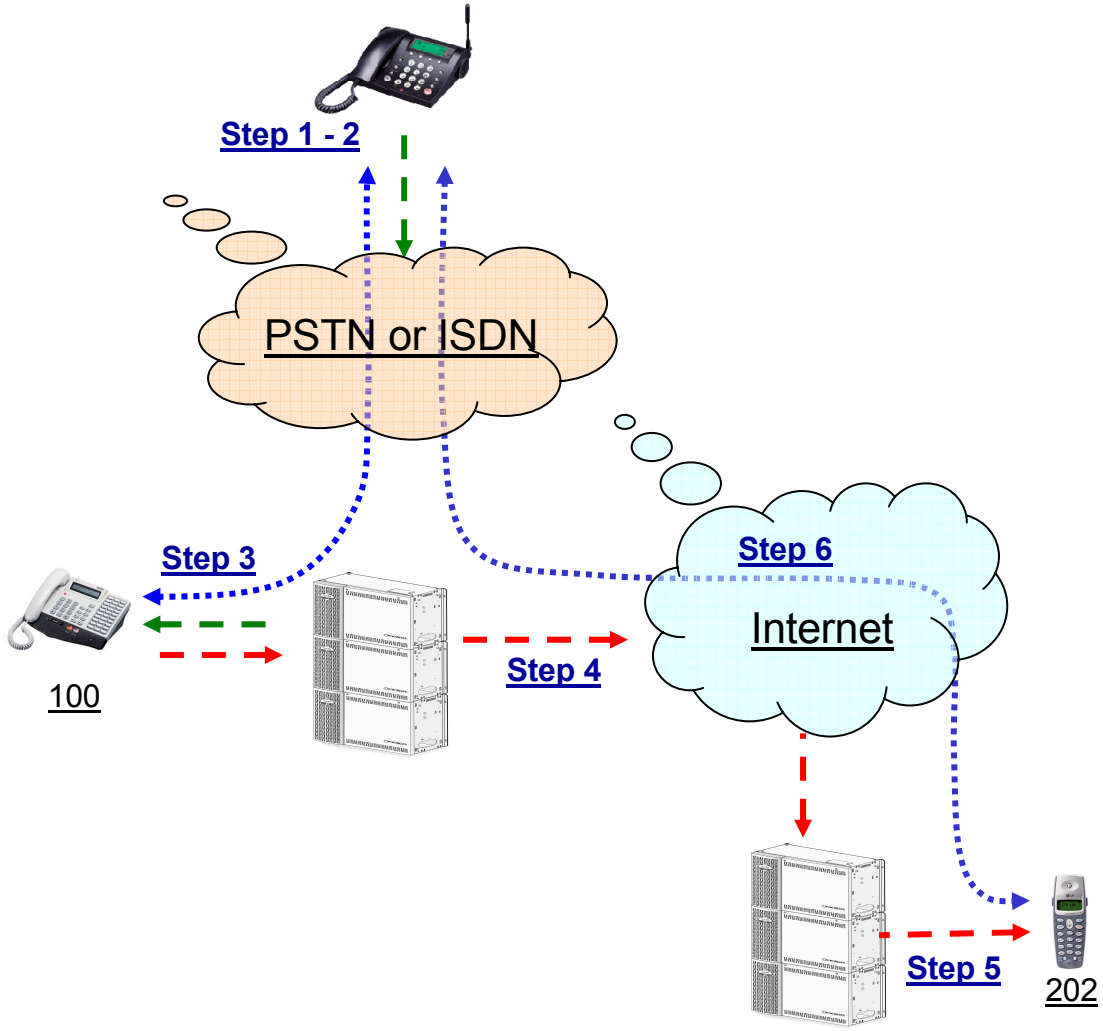



**Figure 2.16.4 Unscreened net transfer**

## Operation

### Screened Transfer

1. Press the **[TRANS/PGM]** button during a conversation. The transferred call will be placed on exclusive hold.
2. Dial the Station number in another Networked System to transfer the call; the transferred-to Station of another System will receive a ring signal.
3. When the transferred-to Station answers, the voice path is connected between the transferring and the transferred-to Stations.
4. Both Stations can talk with one another; the transferred call will remain on hold.
5. Once the transferred-to Station answers, the transferred call will be connected.

**Unscreened Transfer**

1. Press the **[TRANS/PGM]** button at a Station during a conversation. The transferred call is placed on exclusive hold.
2. The Transferring Station then dials the Station number of another Networked System to transfer the call, and goes on-hook.
3. The transferring station goes idle, and the call will ring at the transferred-to Station in the other System.
4. The transferred caller and the transferred-to Station will be connected when the transferred-to Station answers the call.

### Condition

- If both transferred Stations and transferred-to Stations are located in the same system, the Networking CO line that is used for the transferring voice path is not needed. That is, the transfer call will be setup as an intercom call.
- The net transfer will be canceled when the transferring Station User presses the flashing **[TRANS/PGM]** button.
- After the transferring Station goes on-hook, the net transfer call will not recall to the transferring Station though the transferred-to Station.
- If all CO lines are in use, an error tone will be heard when a net transfer is attempted.
- If the call is transferred to a busy station, the busy tone will be heard.

### Admin Programming

- Networking Basic Attributes (PGM 320)
- Networking Supplementary Attributes - Transfer Mode (PGM 321)
- Networking CO Line Attributes (PGM 322)
- Networking Routing Table - Numbering Plan (PGM 324)

## 2.16.5 Net Call Forward

### Description

A Station User can forward Net Calls over the network to any networked Station, Station Group or VMIB in the System, by activating feature codes.

There are two kinds of standard net call forward signaling methods in the H.450 protocol specification: Join and Rerouting. The ipLDK System supports both methods. The main difference is how the connecting path is controlled among the forwarding, forwarded, forwarded-to stations.

### Condition

- To use Net Call Forward, a Networked Station should be activated using ADMIN programming.
- There are several types of Net Call Forwarding: Unconditional, Busy, Busy/No Answer, and No Answer.
- To deactivate Call Forward, press the **[DND/FOR]** button while it is flashing.
- If both the Call Forwarded and Forwarded-to Stations are located in the same System, the networking path CO line is not needed, that is used for the forward voice path; the Forwarded Call will be initiated as an intercom call.
- At the Forwarding System, it does not check the status of the Forwarded-to Station that is in DND, CFW, or Empty, when it sets the Net Call Forward.

### Admin Programming

- Call Forward Attribute (PGM 111)
- Networking Basic Attributes (PGM 320)
- Networking Supplementary Attributes - Transfer Mode (PGM 321)
- Networking CO Line Attribute (PGM 322)
- Networking Routing Table - Numbering Plan (PGM 324)

*2.16.5.1 Net Call Forward – Unconditional*

The Forwarded Station refers to the call originator. The Forwarded Station (the new destination of the call) is rerouted to the Forwarded-to Station by a Forwarding Station (the Station forwarding the call). In Figure 2.16.5.1, the outside caller is the forwarded Station, the forwarded-to Station is Station 202, and the Forwarding Station is Station 100. Refer to Operation for a detailed description of using the Feature.

**Call Flow**

| Step | Flow |
|---|---|
| 1 | Station 100 sets forward to 202 |
| 2 | Outside Caller dials in Station 100 |
| 3 | Call is forwarding to Station 202 |
| 4 | Station 202 rings instead of 100. |
| 5 | Conversation |

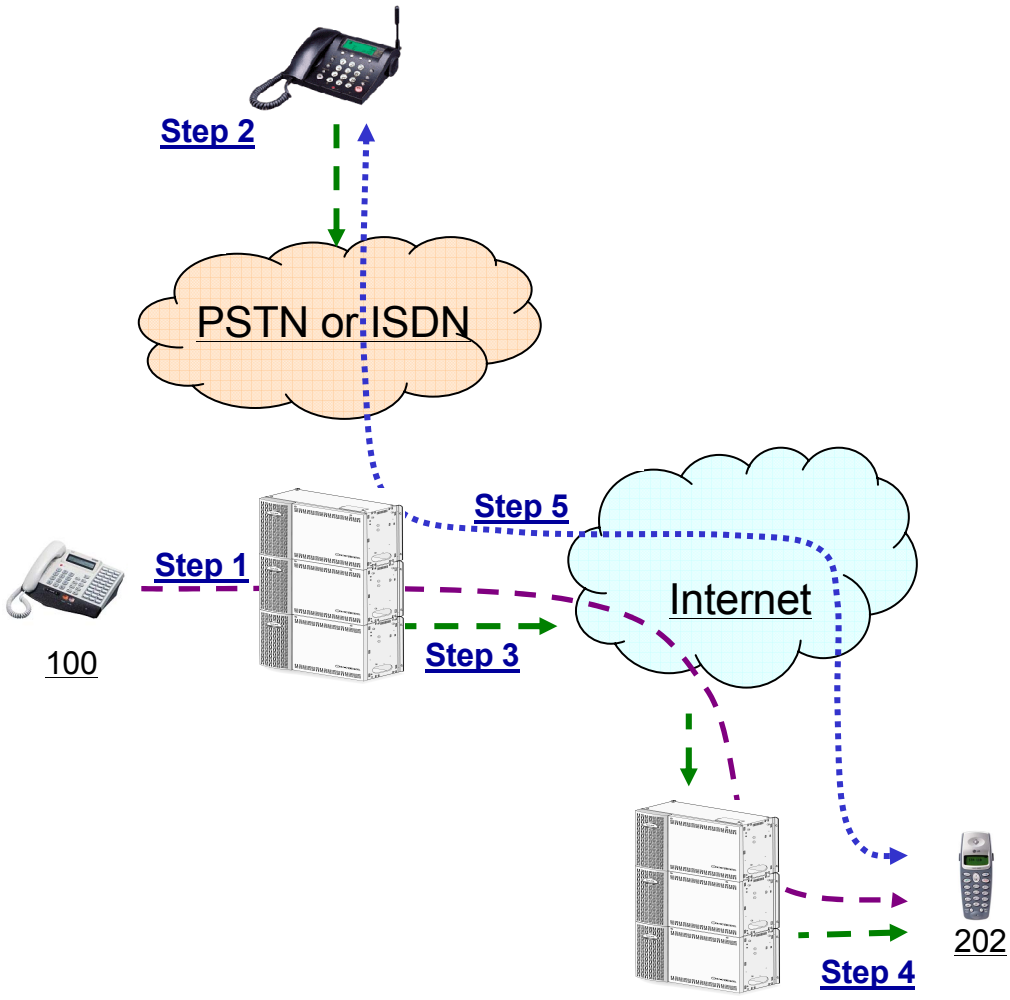



**Figure 2.16.5.1 Unconditional Net Call Forward Operation**

**Operation**

To activate Net Call Forward:

1. Press the **[MON]** button and the **[DND/FOR]** button.
2. Dial the Net Call Forward code (1), and dial a Station number on another networking system; the **[DND/FOR]** button will flash and a confirmation tone will be provided.
3. If there is an incoming call to the net call unconditional Forwarding Station, the call is immediately routed to a Forwarded-to Station, and the Forwarded-to Station will ring.
4. When the Forwarded-to Station is answered, the Call Forwarded and Forwarded-to Station will be connected.

### 2.16.5.2 Net Call Forward - Busy

**Description**
It is possible for a User to forward their Station remotely over the Network when it is busy.

**Operation**
To activate Net Call Forward, busy:

1. Press the **[MON]** button and the **[DND/FOR]** button.
2. Dial Net Call Forward code (2), and dial a Station number on another networking system.
3. The **[DND/FOR]** button will flash and a confirmation tone should be provided.
4. If an incoming call is received at the net call busy Forwarding Station, the call is routed to the set Forwarded-to Station when the called Station is busy.
5. The Forwarded-to Station will ring, and when answered, the call will be connected.

### 2.16.5.3 Net Call Forward - Busy / No Answer

**Description**
It is possible for a User to forward their Station remotely over the Network when it is busy or there is No Answer within the appropriate timer.

**Operation**
To activate Net Call Forward, busy/no answer:

1. Press the **[MON]** button.
2. Press the **[DND/FOR]** button.
3. Dial Net Call Forward code (4), and dial the Station number of another networking system.
4. The **[DND/FOR]** button will flash and a confirmation tone should be provided.
5. If an incoming call is received at the Net Call Busy/No Answer Forwarding Station, the call is routed to a Forwarded-to Station, when the called Station is busy or does not answer.
6. The Forwarded-to Station will ring.
7. When the forwarded-to station is answered, the Call Forwarded and Forwarded-to Station will be connected

### 2.16.5.4 Net Call Forward - No Answer

**Description**
It is possible for a User to forward their Station remotely over the Network when there is No Answer.

**Operation**
To activate Net Call Forward, no answer:

1. Press the **[MON]** button.
2. Then press the **[DND/FOR]** button.
3. Dial the Net Call Forward code (3), and dial the Station number of another networking system.
4. The **[DND/FOR]** button will flash and a confirmation tone should be provided.
5. If an incoming call is received at the Net Call Busy/No Answer Forwarding Station, the call is routed to a Forwarded-to Station, when the called Station is busy or does not answer.
6. The Forwarded-to Station will ring.
7. When the forwarded-to station is answered, the Call Forwarded and Forwarded-to Station will be connected.

## 2.16.6 Net Conference

**Description**

Net Conference is generally the same as the Conference feature, with the additional specification that a Networked Station can be assigned as a conference member.

A call to a Station on one node is able to conference in a party on any other networked node. Members of a conference must be allowed up to 3 Stations of the network.

**Operation**

To conduct a conference from a Station, perform the following Steps:

1. Press the **[CONF]** button, during a network conversation. The connected call will be put on hold and the ICM dial tone should be heard.
2. Make a Net Call to a Station on another Networking System.
3. Press the **[CONF]** button when the second Called Station is answered; the call will be put on hold and an ICM dial tone should be heard.
4. Press the **[CONF]** button again; the conference voice path to all members will be connected.

To cancel a Conference:

1. Any Station on a net conference call can hang up during the conference.
2. The net conference will be ended and the network path will be cleared.

**Condition**

- An IP phone can not be the master station in the Net Conference.
- When an IP phone sends a Net Conference Invite Setup message to a Non-IP phone, the message will be rejected.
- When a Non IP phone sends a Net Conference invite to an IP phone, the normal Setup message should be sent to the IP phone instead of the Invite Setup message.

**Admin Programming**

- Networking Basic Attribute (PGM 320)
- Network Routing Table - Numbering Plan (PGM 324)

## 2.16.7 Call Offer

### Description

Call Offer is the same service as Camp-On, except that the Camp-On is executed in a Networking connection environment at the H.450 protocol standard specification.

When a Station User initiates a Net Call to a busy Station that is located on another networking system, a busy tone will be heard. At that time, the caller can give a signal to the busy station by using of Call Offer service. The busy station (through the receiver or on speakerphone) is notified of the call waiting by a camp-on tone and flashing LED of the **[HOLD/SAVE]** button.

The Figure 2.16.7 and Call Flow Table describe the call offer operation on the networking connection environment.

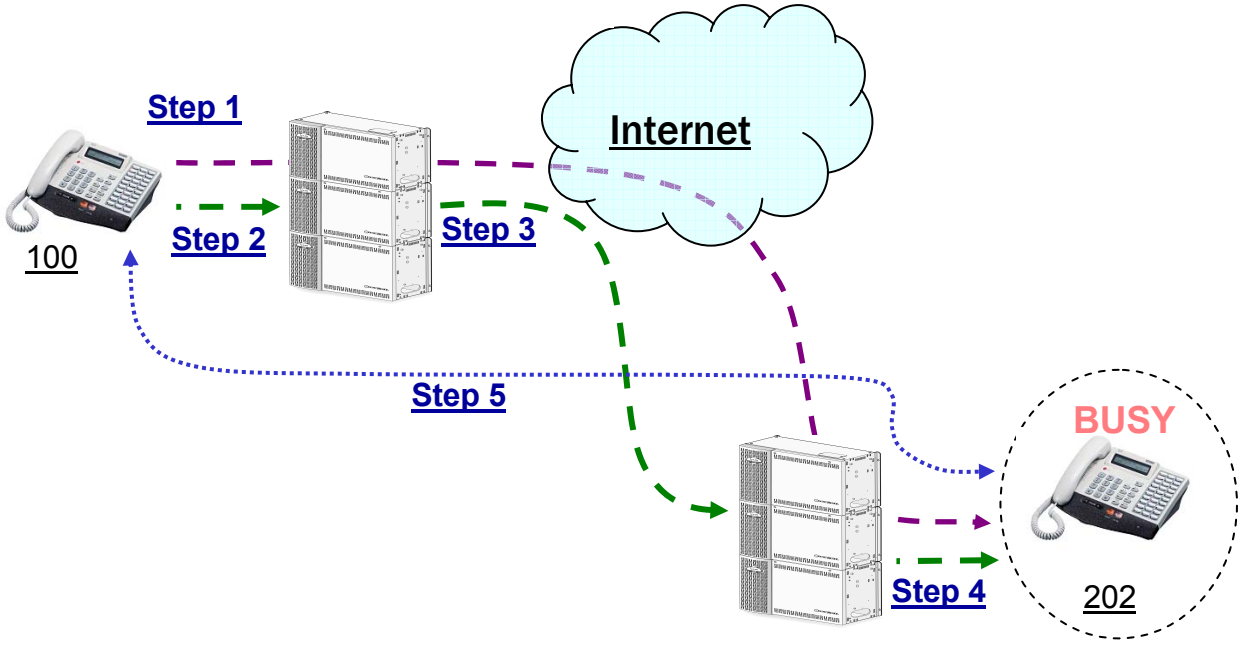



**Figure 2.16.7 The call offer operation on the networking connection environment**

**Call Flow**

| Step | Flow |
|---|---|
| 1 | Station 100 dials 202, but hears a BUSY tone |
| 2 | 100 dials camp-on code “*” |
| 3 | Call is routed to Station 202 |
| 4 | Station 202 gets camp-on signaling |
| 5 | Conversation by pressing Hold button |

### Operation

To activate Call Offer:

1. Dial a valid Station number on another networking system; if busy, the caller will hear a busy tone.
2. Press the Camp-On code (✳); the busy Station will receive an off-hook muted ring (the Calling Station will hear a ring-back tone instead of a busy-tone).

To answer the Call Offer:

1. Press the flashing CO line button while receiving a muted ring.
   OR
2. The muted ring is changed to normal CO ring when you go on-hook state.
3. Then Station User can answer the offered call.

**Condition**

- Call Offer is only applied to a station that is in talk status.
- During a conference or page, Call Offer is not activated.
- The ipLDK System does not support the path reservation mode of a standard QSIG specification.

**Admin Programming**

■Networking Basic Attribute (PGM 320)

## 2.16.8 Call Completion

**Description**

Call Completion is the same service as Call Back, except that it is conducted within a networking connection environment, and is used at H.450 protocol standard specification.

There are two kinds of call completion as follows:

**Completion of Calls to Busy Subscribers (CCBS)**—After calling a user in another system using basic call and encountering a busy tone. A station user can be notified when the busy destination of another system becomes idle. If the user wants to make a call to the destination on that notification, the call can be reinitiated to the destination of another system again.

**Completion of Calls on No Reply (CCNR)**—After calling a user in another system using basic call and encountering no reply. The caller can be notified when the destination becomes an idle status after some actions. If the caller wants to make a call to the destination, the call can be reinitiated to the destination again.

Currently, the system supports only the Connection Retain Mode of CCBS in this stage. Figure 2.16.8 and the Call Flow Table describe the CCBS operation on the networking connection environment.

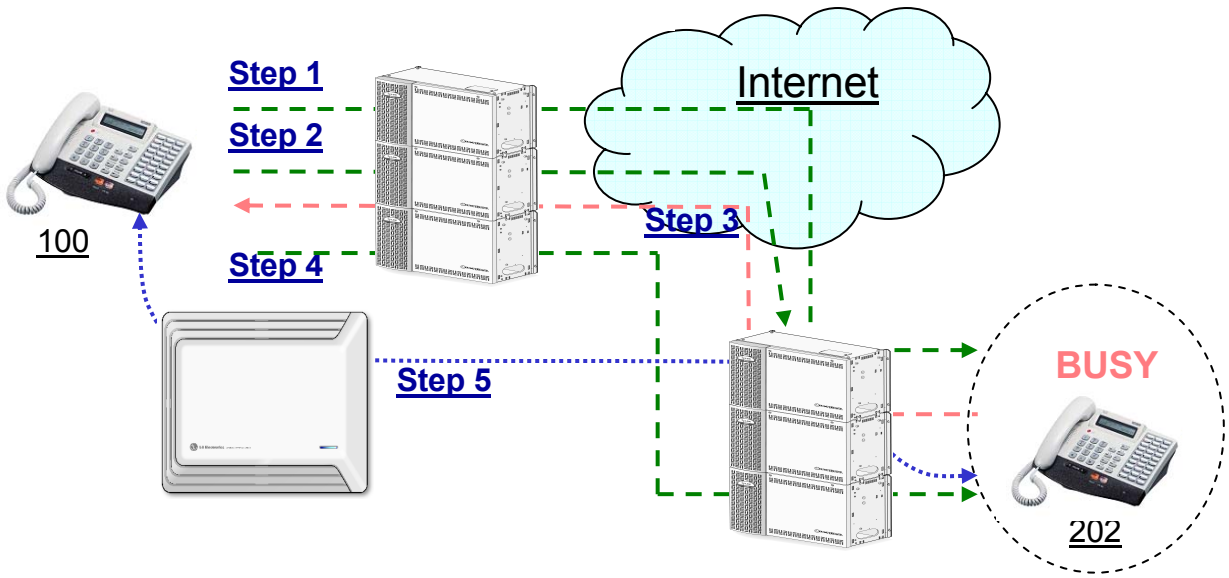



**Figure 2.16.8 The CBS operation**

**Call Flow**

| Step | Flow |
|---|---|
| 1 | Station 100 dials 202, but hears BUSY tone |
| 2 | Station 100 press **[CALL BK]** button, and goes to IDLE |
| 3 | Call-back ring to station 100 when 202 is IDLE |
| 4 | Station 100 lifts handset, then station 202 is ringing |
| 5 | Conversation |

### Operation
To activate CCBS, perform the following Steps:

1. Dial a Station on another networking System.
2. If the busy tone is provided, press the **[CALLBK]** button; a confirmation tone will be heard, and the call will be disconnected.
3. When busy Called Station returns Idle, the Caller will receive a call-back ring.
4. When the Caller answers the call-back ring, a new call will be initiated to the Calling Station.

### Condition
- CCBS is not supported on all LG-NORTEL CO. LTD. ISDN terminals.
- Stand-alone IP Phones that support H.450 can activate the CCBS feature.
- A new Call Back request left at a Station will cancel any previous callback messages.
- A voice message cannot be left even though the VMIB is installed in a local system.
- When the originator does not answer the call back ring within net timer, the call will be cleared.
- There are two CCBS modes—Connection Mode and Disconnection Mode. This can be selected at (PGM 320).

### Admin Programming
■Networking Basic Attribute (PGM 320)

## 2.16.9 Do-Not-Disturb (DND)

### Description
Net Calls to a Station can be rejected using the DND mode; the Calling Station will hear a busy tone.

### Operation
To activate DND mode, perform the following Steps:

1. Press the **[DND]** button at the Station.
2. When a call is received at the Station, the Caller will hear a busy tone; the Station in DND mode will not receive any notification of the call.

### Condition
- When a Station is in DND mode, the **[NET DSS]** of the DND Station will flash if the BLF (Busy Lamp Field) manager is activated.

### Admin Programming
■DND Attribute (PGM 111)

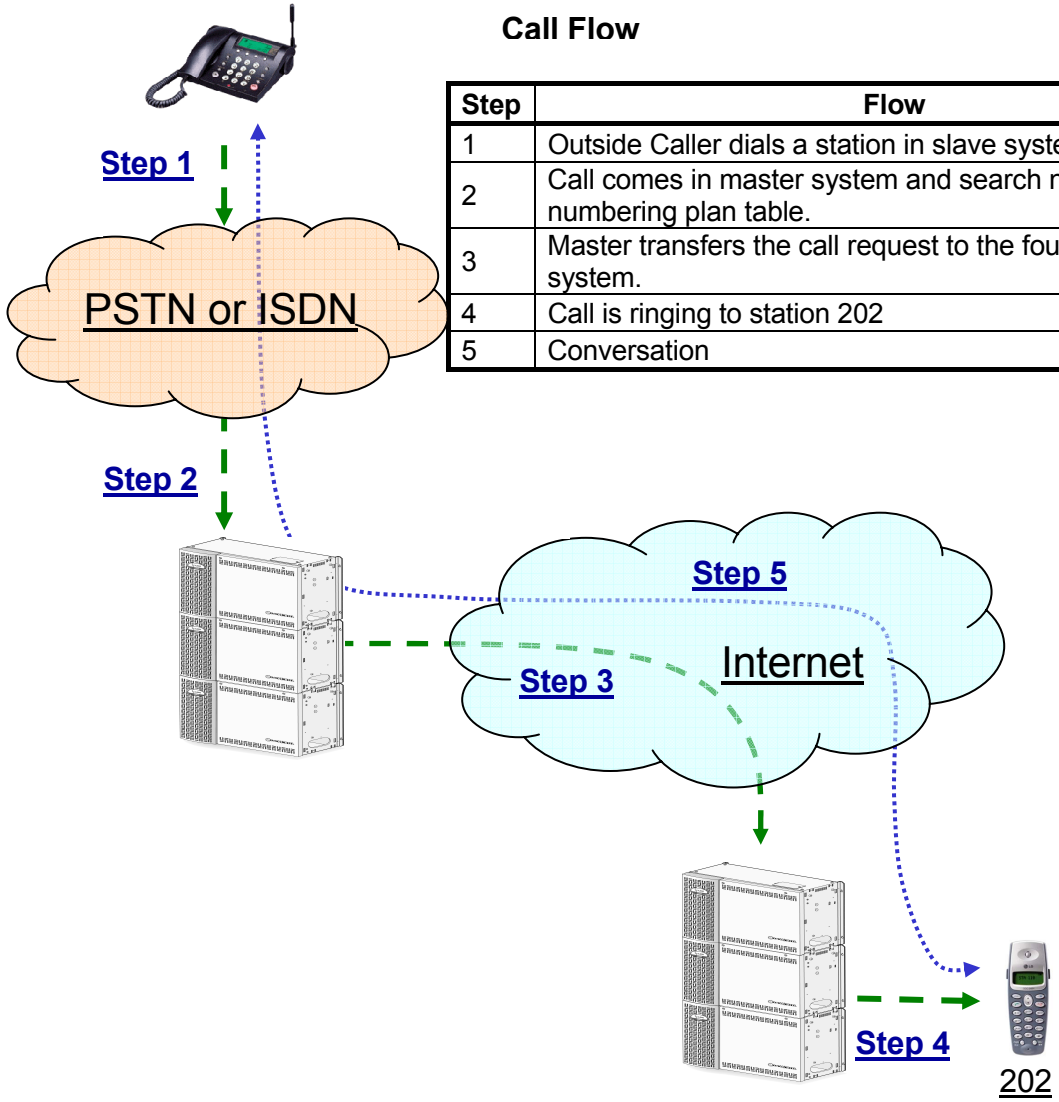
## 2.16.10 CO Transit - In

**Description**

The CO Transit-In automatically re-routes incoming DID/MSN calls from another networked System.

Figure 2.16.10 describes the CO TRANSIT-IN operation on the networking connection environment.

At the first step, the outside caller makes a DID call to the station 202, so the DID call request is arrived at the master system. The networking system of station 202 is not connected to PSTN directly, but it can be connected to PSTN through another networking system (master system. At the second step, the master system checks the received DID call destination. If the DID destination is matched with a station of system, the DID call is routed to the station. But, if the DID destination is not matched, the master system is search the network numbering plan table (see Ref.1), whether the destination is matched with a station of the registered another networking system. In this case, the master system transfers the received DID call request to the found networking system, like to the third step. At the fourth step, the CO transit-in DID call is ringing to the station 202. The caller can make a conversation when the station 202 is answered.




**Call Flow**

| Step | Flow |
|---|---|
| 1 | Outside Caller dials a station in slave system |
| 2 | Call comes in master system and search networking numbering plan table. |
| 3 | Master transfers the call request to the found networking system. |
| 4 | Call is ringing to station 202 |
| 5 | Conversation |

**Figure 2.16.10 The CO Transit-In Operation**

**Additional Programming**

**Master**

PGM 143 FLEX 4 (DID Conversion Type) = 2
PGM 231 (Flexible DID Table) = Assign Slave extension

**Operation**

CO Transit-In:

1. When an incoming call is received from the PABX, the call is automatically routed, and a Network CO line is secured according to the DID conversion.
2. The incoming call will ring with CLI at the Station being called; the Caller will hear a ring-back tone.
3. Once the call is answered at the Station, it will be connected.

**Condition**

- There are not timers affiliated with CO Transit-In operation.
- The Caller will hear a busy tone if a networking path is not available during transit.

**Reference**

**A.** Network Numbering Plan Table 4.12.4

**Admin Programming**

- Networking Routing Table - Numbering Plan (PGM 324)
- DID Conversion Type (PGM 143)
- Flexible DID Table – Assign Slave Extension (PGM 231)

## 2.16.11 CO Transit - Out

**Description**

The CO Transit-Out increases efficiency of CO lines and reduces call costs by routing outgoing CO calls to the nearest appropriate point on the networked System. The System should be provided sufficient digit translation and string analysis options to enable the switch to route the call correctly.

Figure 2.16.11 and the Call Flow Table describe the CO TRANSIT-OUT operation on the networking connection environment.

At the first step, the station 202 of the slave system dials the CO TRANSIT-OUT code, that is registered the network numbering plan table (ADMIN program 324). The term of CO TARNSIT-OUT code is that a station of slave system can seize the PSTN CO line of the master system. At the second step, the slave system seizes a CO line that is preprogrammed for transmitting the CO TRANSIT-OUT code to the master system. And, the dialed code is transmitted to the master system. At the third step, the master system seizes a CO line that is preprogrammed to serve the lend request by the CO TRANSIT-OUT code. After seizing the PSTN CO line, the master system sends the digit information to PSTN that is dialed from the station of the slave system. At the fourth step, the called user of PSTN receives the ring. The caller and called users can make a conversation when the called user is answered.

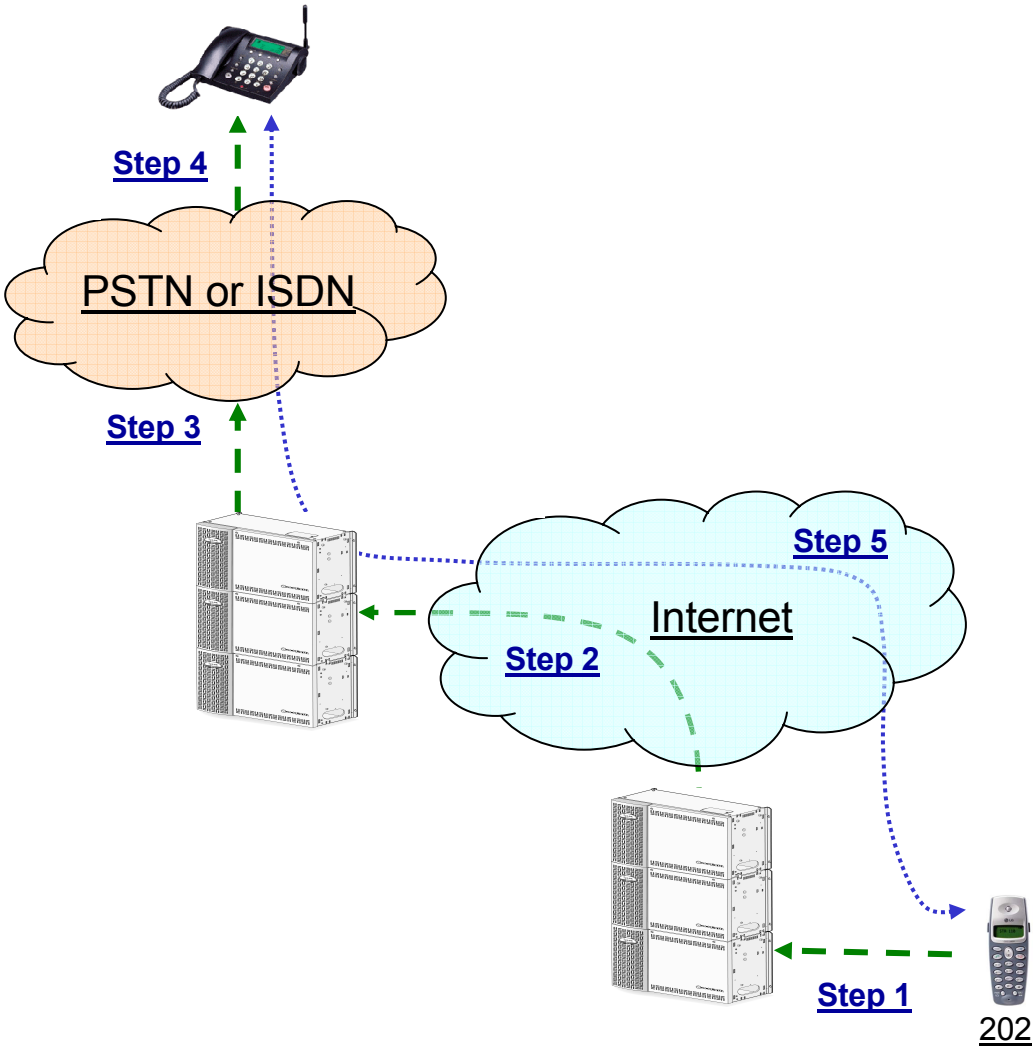



**Figure 2.16.11 The CO TRANSIT-OUT operation**

**Call Flow**

| Step | Flow |
|---|---|
| 1 | Station 202 dials CO transit code of PGM 324 |
| 2 | Dialed digit goes to master system |
| 3 | Master sizes the real PX CO line and dials |
| 4 | Outside party rings |
| 5 | Conversation |

## Additional Programming

**Master**

- PGM 322 BTN 1 (Net Col Group) = 02 for PSTN Lines
- BTN 4 (Net CO Type) = PSTN
- PGM 324 BIN 10
- FLEX 1 (Usage) = PSTN
- FLEX 2 (Net Code) = 9 (transit code) ▶ Delete 1st CO Group access code
- FLEX 3 (Net CO Group) = 02

**Slave**

- PGM 324 BIN 10
- FLEX 1 (Usage) = PSTN
- FLEX 2 (Net Code) = 9 (transit code) ▶ Delete 1st CO Group access code
- FLEX 3 (Net CO Group) = 01
- FLEX 4 (CPN) = 192.168.23.21
- FLEX 7 (DGT Repeat) = YES

### Operation

To activate the CO Transit-Out:

1. Dial the CO Transit-Out code from a Station on another networked System.
2. The Networked System will secure a CO line that is preprogrammed for transmitting the CO Transit-Out codes to the Master System
3. The Master System will secure a CO line that is preprogrammed to receive the CO Transit-Out codes.
4. After seizing a PSTN CO line, the Master System will send the digit information to place a call.
5. The Called Station will ring, and the call will be connected when it is answered.

### Condition

- To use CO Transit-Out, the networked system user must dial the CO transit-out code; the CO Transit-Out service is not activated by pressing a CO Line button.
- The Station COS of the networked system is applied for toll restriction.
- At the Master System, the Attendant must have CO access authority to make a public connection.
- For CO Transit-Out, any code will be available using NET Routing Table (PGM 324). If there is a conflict between NET Routing Table and System Numbering Plan, the System Numbering Plan will have the highest priority.
- If the CO Transit-Out code is programmed in the Network Numbering Plan Table, then the type value of this entry must be set to PSTN (ADMIN program 324).
- If the Networked System isn't connected to the Master System directly, the CO Transit-Out code can be transmitted through the other networked Systems transparently by setting the PGM 324.
- At the Master System, the PSTN CO lines must be set (PGM 322).
- If Autho-Code COS Usage Option (ADMIN program 324) is set, when system user of other part dial transit-out code, password-request dvu message will be played. Then according to password, transit-out COS is determined from Autho-Code Table. If old autho-code is used (5 digit authorization code), Co-to-CO COS will be applied.
- When master system set Autho-Code COS Usage Option, in salve system transit-out code and autho-code, dialed number will be printed in SMDR. If Admin of slave system want to hide this number in SMDR, Admin can use SMDR Dial Hidden Option. If this option is set, all of dialed numbers will not be printed for SMDR in slave system.

### Admin Programming

- Networking CO Line Type (PGM 322 – FLEX 2)
- Network Routing Table - Numbering Plan (PGM 324)

## 2.16.12 Message Waiting Indication (MWI)

**Description**

The Message Waiting Indication (MWI) is the same service as the Calling Line Identification (CLI) message wait (refer to Admin Programming).

A Station can leave a MWI message, when a station receives a No Answer on another Networking System. If MWI is enabled at the called Station, software will cause the Station lamp to flash when a messaging is waiting.

**Operation**

To retrieve MWI messages, perform the following Steps:

1. Press the flashing **[CALLBK]** button.
2. MWI contents (CLI number, date and time, the calling count from the same CLI) will be shown on the LCD.
3. Press the volume up/down [▲ ▼] button; the previous or next MWI is displayed, depending on which volume button is pressed.

To delete the current CLI Message and see the next one:

1. Press the **[CONF]** button.
2. The current MWI message will be deleted; a confirmation tone should be heard, and the next MWI message will be displayed.

To place a Call Back from a MWI:

1. Retrieve MWI by pressing the flashing **[CALLBK]** button, and using the volume up/down **[▲ ▼]** buttons.
2. Press **[HOLD/SAVE]** button.
3. Then System will attempt to connect a net call according to MWI data.

**Condition**

- The feature MWI is available on Stations with a LCD panel only.
- When the System makes a call back according to MWI data, the CO line is selected within the Network CO group.

**Admin Programming**

- CLI Message Wait (PGM 114)
- Networking Basic Attribute (PGM 320)
- Networking CO Line Attribute (PGM 322)
- Networking Routing Table - Numbering Plan (PGM 324)

## 2.16.13 Absent Text Message

**Description**
Absent Text Message is available within the networking connection environment.

If a Station User leaves his desk with an Absent Text Message active at the Station, an incoming call to this Station from another Networking System will receive the absent text message (displayed on the calling Station LCD).

**Operation**
When Absent Text Message is active at a Station, operation of the feature is automatic when a call is received from a Station from another Networked System.

**Condition**
- A text message will be displayed on the LCD of the networked calling station; the called station still will receive the ring signal.
- This feature is not supported when the calling party is using a WHTU on a Large LCD DKTU.

## 2.16.14 Attendant Call Service (CAS)

**Description**
An Attendant call from a Station on a Networked System can be routed to the Centralized Attendant (CA) of Call Attendant Service (CAS) master system. This call will be queued when all centralized attendants are busy, like to the normal attendant call and queuing operation.

Figure 2.16.14 describes the CAS operation on the networking connection environment. In the figure, there are four ipLDK networking systems. ipLDK B, C, D system will be programmed CA in his system and Attendant DND should be set to each system attendant.

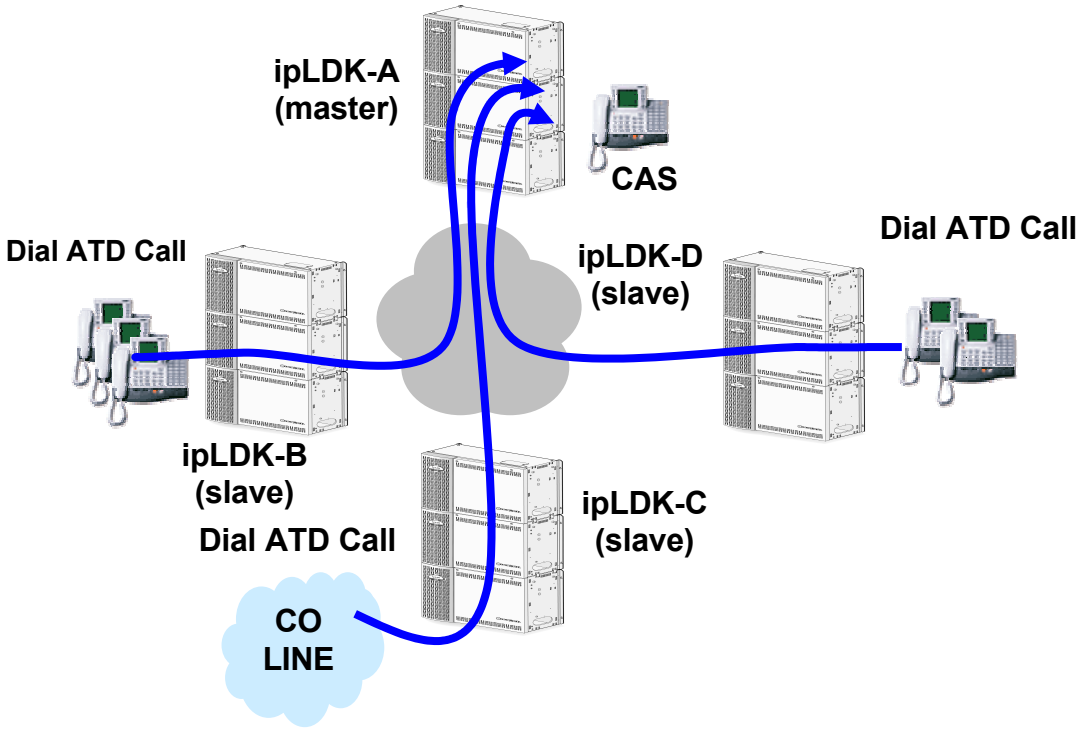



**Figure 2.16.14 CAS Operation**

**Operation**
For CAS Operation:

1. Assign Net DSS to the attendant (except System Attendant).
2. System Attendant presses ATD DND button.
3. Dial Attendant code at any station in the system, then the call will be routed to the Net Attendant.
4. The system provides Ring Back Tone to calling station and the **[NET DSS]** button lights

**Condition**
- ICM Call is routed to Net attendant if system attendant is in ATD_DND mode.
- CO Call can be routed to Net attendant only if DID/DISA destination is ATD and the ring is not assigned to any station.
- When Net Attendant is assigned at PGM 164, at first system attendant and other main attendant has to be assigned in own system, and then Net Attendant has to be assigned at the end.

**Admin Programming**
- Flex Button Assignment - Station Programming Button (PGM 115)
- Attendant Assignment (PGM 164)
- DID/DISA Destination (PGM 167)
- CO Ring Assignment (PGM 144)

## 2.16.15 Centralized VMS

**Description**
All voice mail within Networked Systems can be recorded in an external VMS.

**Condition**
- The centralized VMS should be assigned in Networked Systems, and the number of the centralized VMS should use the representative number of mail accesses created in the Master System.
- The Numbering Plan including the representative of mail access assigned in Master System should be included in the Numbering Plan of QSIG group in Networked System.

**Admin Programming**
- Network Destination MPB IP (PGM 324)
- Station Group Assignment - Centralized VMS Assign (PGM 190)

## 2.16.16 Busy Lamp Field (BLF)

**Description**
A Station on a Networked System can program the appearance of a Busy Lamp Field (BLF) status on other Stations in the Networked System. The BLF button can also be used to make a Net Call to another Networked Station.

To use BLF service, the manager software, and PC application, must be installed from a PC. The Gate Keeper is the PC server that is installed with the BLF manager software for operational purposes.

Figure 2.16.16 describes the BLF operation on the networking configuration with the gate keeper. In the figure, there are four ipLDK networking systems. Among them, Stations 4100, 5111, and 6210 have the BLF button assigned to the Station 1100. The Networking System of Station 1100 transmits the status of the Station to the Gate Keeper periodically. And the gate keeper is also periodically multi-casts the status of Station 1100 to the

Networking System. The BLF button of Stations 4100, 5111, and 6210 updates the status of Station 1100 to its BLF LED.

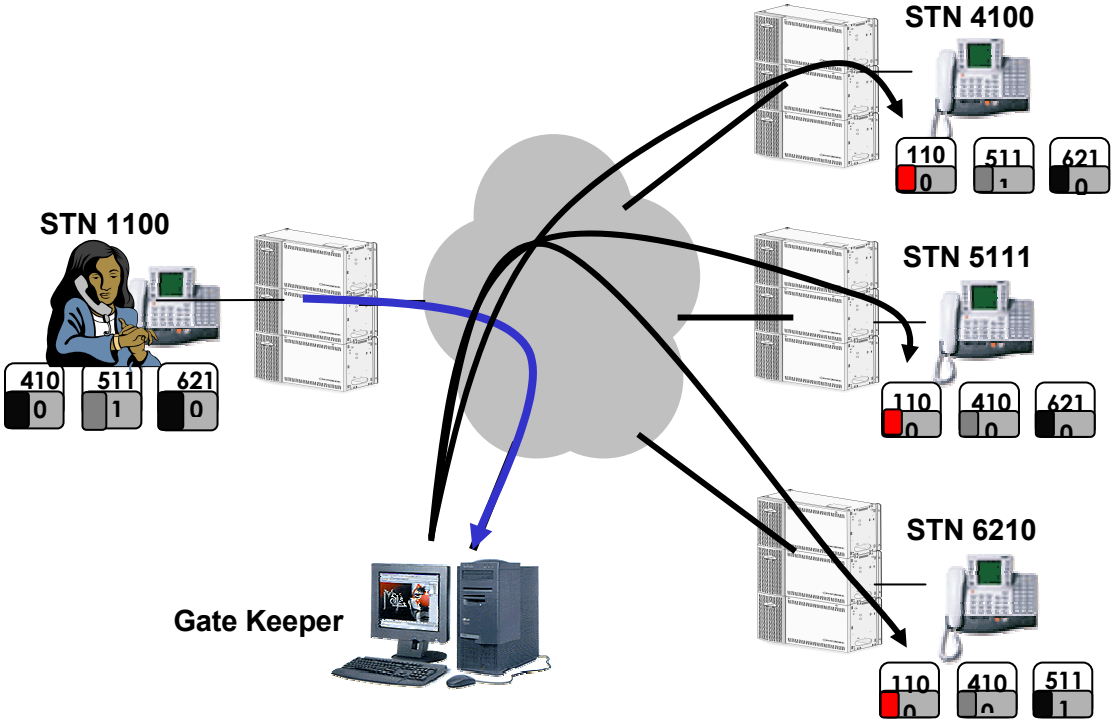



**Figure 2.16.16 The BLF Operation (including Gate Keeper).**

## Operation

BLF is automatically updated in the following coordinating ways:

1. The BLF manager software periodically receives the status of Stations from whole system.
2. The BLF manager software sends broadcast messages to whole the System when the status changes.
3. When a Station button LED is illuminated, it signifies a station not in the idle state.

***NOTE**—The UDP port will be used to send the status information, and TCP port will be used to send other information.*

## Condition

- The BLF manager software should be installed on one System for the whole Networked System.
- The number of Net DSS can be restricted according to the capability of each System.
- When a flexible button on a Station is assigned as the **[NET DSS]** button of another system, the System serves as local BLF to indicate the status of the Station.
- CO BLF is not supported, and also the ringing signal does not update the status of that Station – ICM / CO / Transfer / CO Recall ring.
- When a Station is in DND mode, the **[NET DSS]** button will flash.
- If the BLF manager does not exist, BLF services can be activated between only two Systems. The address of the Gate Keeper should be registered on each System.

## Reference

- BLF Manager Software (PC Application)

## Admin Programming

- Networking Supplementary Attributes (PGM 321)
- TCP Port Assign (PGM 321 – FLEX2)
- UDP Port Assign (PGM 321 – FLEX3)
- BLF Manager IP Address Assign (PGM 321 – FLEX4)
- Duration of BLF Status (PGM 321 – FLEX5)

## 2.16.17 Net Follow-Me Forward

**Description**
A User from one System can activate a Follow-Me-Forward from a Station on another System within the Network. Once activated, all calls to the Forwarded Station will be forwarded to the designated Station over the Network. The forward can only be cancelled from the Forwarded Station.

**Operation**
To activate Net Call Forward- Follow-Me, perform the following Steps:

1. From the Station that the calls will be forwarded to, press the **[SPEAKER]** + **[DND/FOR]** button.
2. Dial the Follow-Me-Forward code (0) + the Station number that is to be Call-Forwarded from another System.
3. Dial the Authorization Code + the # key; the **[DND/FOR]** button will flash at the Forwarding Station and a confirmation tone will be provided.
4. All calls to the Forwarding Station will be routed to the Forwarded Station.

To deactivate Net Call Forward – Follow-Me:

1. At the User's own Station, press the flashing **[DND/FOR]** button.
2. The **[DND/FOR]** button will be extinguished, and the Net Call Forward-Follow Me will be cancelled.

**Condition**
- Authorization code should be registered to use Follow-Me Call Forward.
- Remote deactivation is not supported.
- The confirmation tone will be provided even though Follow-Me Forward may not be allowed by the other system.
- Net Follow-Me Forward is available within a VOIP networking environment only.
- Among networked systems, the same Authorization code mode (5 Digit /Variable Authorization code Usage) should be programmed.

**Admin Programming**
■Authorization Code Table (PGM 227)

## 2.16.18 Centralized SMDR for Transit Call

**Description**
The SMDR call records from the Master System will include the station number from the Networked Systems (NET-Number) on CO Transit-In and CO Transit-Out calls.

**Operation**
1. The NET-Number automatically will be included in the Centralized SMDR output for CO Transit-In and CO Transit-Out calls.

**Condition**
- Up to 4 digits can be displayed in the Station column.
- Only applies to ISDN CO lines on the Master system.

Example SMDR Printout from the Master System:

```
---- Site Name : MASTER ----------------------------------------------------------------------------------------------------
 NO    STA    CO   TIME       START          DIALED        ACT   CNT   COST   ACCOUNT CODE
------ ------ ---- ------ --------- ----------- ---- ----- -------- ----------------------
0027    200    001  00:00:05   02/02/01 05:46   O85620140    0     0

0029 CO006    011   00:00:02   02/02/01 05:46 O200          0     0
0028 CO011    006   00:00:03   02/02/01 05:46 I RING 00:01
----------------------------------------------------------------------------------------------------------------------------
```

Lines 0027 show the resultant printout for a CO Transit-Out call from Station 200 on the Networked System.

Lines 0028 & 0029 show the resultant printout for an incoming CO Transit-In call to Station 200 on the Networked Systems. ISDN Line 006 was used for the incoming call and VOIP Line 011 was used between Systems. The NET-Number (200) is displayed as the Outgoing Number from the Master System to the Networked Systems.

## 2.16.19 DECT Mobility

**Description**
When one WHTU is registered more than two networked systems at the same time and the user of WHTU moves to another networking system, the incoming call to WHTU will be routed to another networking system automatically.

**Operation**
1. Register one WHTU to more than two systems. (see Ref.1)
2. Move WHTU from A system to B system.
3. Call to that WHTU of A system will be routed to the same WHTU of B system.

**Condition**
- DECT mobility information is sent through LAN port of MPB.
- The physical port number of WHTU should be same on whole systems.

**Reference**
**A.** Register on WHTU to more than two systems: Refer to 'DECT INSTALLATION MANUAL'.

**Admin Programming**
■Network Destination MPB IP 4.12.4.6 (PGM 324 – FLEX 6)

## 2.16.20 NET Firewall routing

**Description**

ipLDK supports networking feature regardless of local network or different network.

**Operation**

In the same network configuration.

If the networking system use the same network, and then Firewall Routing should be set as OFF.

- Local IP address will be used for networking feature.

In the different network configuration.

If the networking system use the different network, and then Firewall Routing should be set as ON.

- Firewall IP address will be used for networking feature.

**Condition**

- A user can program Firewall Routing feature with each net numbering plan table.

**Admin Programming**

■Firewall Routing **(PGM 324 – FLEX 9)**

## 2.16.21 Security of Transit-Out Code with registered IP

**Description**

When system receives setup packet for Transit-Out feature from VOI CO line, system can check setup packet with registered IP whether this packet is valid or not. If [TRANSIT-OUT SECURITY] admin is set, received IP in all of received setup packet for transit-out feature will be checked with registered IP, and if this IP is verified, transit-out feature will be operated.

Verification is comparison with received IP in setup packet and registered IP: system compare received IP number with all of registered CPN Info IP at NET Number table (PGM324).

If [TRANSIT-OUT SECURITY] admin is set and if received IP in setup packet is not matched with chosen IP numbers, then this call will be disconnected automatically.

**Operation**

To set [Transit-Out Security] Option:

1. PGM 161 and Flex 23.
2. User can set ON or OFF this admin.

Operation Step

1. Setup packet for transit-out is arrived from VOI line.
2. If transit-out security option is set, system searches for registered IP in Net Number tables.
3. If received IP is not matched with all of registered IP in Net Number Table, this call will be disconnected.
4. When matched IP is found, transit-out feature will be operated.

**Condition**

- If user wants to set transit-out security function, user has to set [Transit-Out Security] admin and has to set IP numbers at CPN Info in Net Number Table.
- Transit-Out Security Check is only used at VOI CO line.

**Admin Programming**

■ Transit Out Security **(PGM 161 – FLEX23)**

# 2.17 2B Function

**Description**

Allows the connection of secondary devices to a primary station. To extend a primary, the additional device is connected directly to a primary station with a 2B module. There are 3 kinds of 2B module that can be used with some LKD model stations – DTIU, SLIU. One type(DTIU) allows of the addition of a second DKTU, the other(SLIU) allows of the addition of SLT devices (station, fax, answer microphone or modem).

**Operation**

Because the second device required the additional power, a small power supply is needed at the 2B module when the distance between primary station and second device is long. Figure 2.17 describes that the second devices connect to primary station with 2B module.

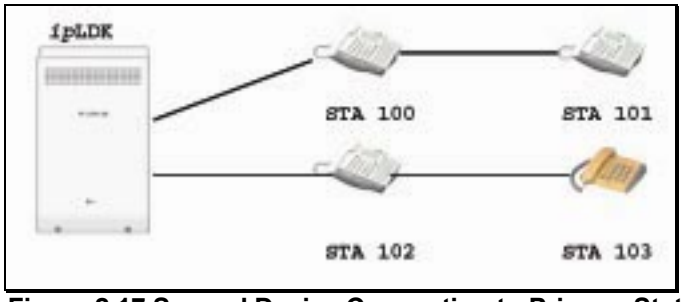



**Figure 2.17 Second Device Connection to Primary Station**

**Condition**

- This feature is available at LKD model stations (with 8/30/44 button) and SLIU, DTIU 2B option modules are needed.
- The maximum station capacity of the system is the same even if the 2B phone is used.
- In ipLDK system, one station is designed as one voice channel. To use 2B feature, the primary station should be connected to an odd port. When DKTU with 2B option is installed, the next port should not be used.
- The second station operates as the same with a normal station. But, the second SLT is not available for the message wait lamp.

# 2.18 Traffic Analysis

**Description**

The system can monitor and print various system activities at the request of the main Attendant (refer to Ref. A). The information can be used to:

- Monitor and evaluate system performance
- Observe current usage and take corrective actions, if needed.
- Anticipate possible CO line problems
- Determine system updates and upgrades

The traffic data is output to the RS-232C or LAN. ipLDK system will support the following traffic reports:

- Attendant Traffic Report
- Call Summary Report
- Call Hourly Report
- H/W Unit Usage Summary Report
- CO line Traffic Summary Report
- CO line Traffic Hourly Report

**Operation**

The traffic analysis is only available at main Attendant (refer to *Attendant Programming Menu Table* in the **ADMIN Programming Manual**). The measurement time type can be one of Today's peak time, Yesterday's peak time, Last hour, Yesterday's total and Today's total.

To print all summary traffic report, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0121.
3. Select Measurement Time type.
4. Press the **[HOLD/SAVE]** button.

To print all summary traffic report periodically:

1. Press the **[TRANS/PGM]** button.
2. Dial 0122.
3. Select the Measurement Time type.
4. Press the **[HOLD/SAVE]** button.

To cancel periodic printing of all summary traffic report:

1. Press the **[TRANS/PGM]** button.
2. Dial 0123.
3. Press the **[HOLD/SAVE]** button.

To print the each traffic report:

1. Press the **[TRANS/PGM]** button.
2. Dial 0124-0129.
3. Select Measurement Time type or CO group number if required.
4. Press the **[HOLD/SAVE]** button.

**Condition**

- This feature is available at main Attendant.
- The Printing of all summary service will generate attendant traffic report, call summary report, H/W unit usage summary report, and CO traffic summary report.

**Reference**

- **A.** Attendant: 2.13

**Admin Programming**

- Print Port Selection (PGM 175)

## 2.18.1 Attendant Reports

### Description

ipLDK system supports the following report to analyze the attendant resource.

**Attendant Traffic Report**—Choose one of the following: time duration, today's peak time, yesterday's peak time, last hour, yesterday's total and today's total. It provides the following information fields.

- **Analysis Start Hour** – Starting time of hour duration which the data is recorded
- **Attendant Number** – the station number of attendant
- **Total Calls** – The number of total incoming calls except CO ring group call, hold recall ring
- **Calls Answered** – The number of answered calls by all active attendants during the measuring hour.
- **Calls Abandoned** – The number of calls which ring at attendant and is dropped before answering at attendant.
- **Calls Held-Abandoned** – The number of calls which is dropped while the call is in hold mode. Held calls which is time out and recalled are included in this call count.
- **Calls Held** – The number of calls which answered by attendant and placed on hold state by attendant.
- **Time Available** – The time duration which the attendants don't answer the calls but, are available to handle new calls. Measured with minutes.
- **Time Talk** – The total time during measuring interval (the attendants are active or converse with a CO line). Talk time is not started until the call is answered by attendant. The duration of time between call termination and answering at attendant is not accumulated as Time Available or Time Talk.
- **Time Held** – The total amount of time which attendants have calls on hold.
- **Time No Answer** – The average amount of time that calls in queue and/or ringing at attendant before the caller hangs up.
- **Speed of Answer** – The average elapsed time from when a call is terminated by attendant to when the call is answered by an attendant.
- **Type** – Type of attendant ( system or main or intercom tenancy group)

### Operation

To print the Attendant Traffic Report at main attendant:

1. Press the **[TRANS/PGM]** button.
2. Dial 0124.
3. Select Measurement Time type.
4. Press the **[HOLD/SAVE]** button.

*Ex.)*

```
==========================================================================
Site Name     :
Report Type : Attendant Traffic Report - Yesterday Total
Date          : 02/12/04 13:14
==========================================================================

  Atd   Meas          --------- Calls ---------      ------- Time ------        Time   Speed     Atd
  No    Hour   Total  Ans Abnd H-Abd Held   Avail    Talk    Held   NoAns  Ans       Type

  2629  --:--      9    3     6     0    0  02:02   00:00   00:00   00:00  00:00  Sys

  4807  --:--      8    6     2     0    0  04:21   00:13   00:00   00:09  00:04  Main
  3619  --:--      4    4     0     0    0  01:04   00:21   00:00    --:--  00:01  Main
  2618  --:--      0    0     0     0    0  00:05   00:00   00:00    --:--  --:--  Main
  3629  --:--      6    1     5     0    0  02:58   00:23   00:00   00:14  00:03  Main
```

## 2.18.2 Call Reports

### Description

ipLDK system supports the following report to analyze the call status of the system.

**Call Summary Report—**Monitor all day's call traffic and generate this report that shows call status of last hour, today's peak time, yesterday's peak time, yesterday's total and today's total.

**Call Hourly Report—**Analysis of call overload by showing the last 24hour's per hour call.

This report provides the following information fields:

- **Analysis Start Hour** – Starting time of hour duration which the data is recorded
- **Number of Calls Completed** – The total number of calls completed or answered during the listed hour.

### Operation

To print the Call Summary Report at main Attendant, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0125.

To print the Call Hourly Report at main Attendant:

1. Press the **[TRANS/PGM]** button.
2. Dial 0126.

*Ex.)*

**==========**

**Site Name :**
**Report Type : Call Summary Report**
**Date : 02/12/04 13:14**

**==========**

| | Analysis Start Hour | Number of Calls Completed |
|---|---|---|
| **Last Hour** | **13:00** | **14** |
| **Today Peak** | **10:00** | **141** |
| **Yesterday Peak** | **10:00** | **119** |
| **Today Total** | **--:--** | **413** |
| **Yesterday Total** | **--:--** | **970** |

## 2.18.3 CO Reports

### Description

ipLDK system supports the following report to analyze the traffics of CO line group.

**CO Traffic Summary Report**—Analysis of traffic status of the CO group by showing applicable statistics. Choose one of the following: time duration, today's peak time, yesterday's peak time, last hour, yesterday's total and today's total. It provides the following information fields:

- **Peak Hour for All CO Groups** – The time duration (hour) in a day that has the largest total usage when summed over all CO groups.
- **Group Number** – A number that identifies each CO group associated with the displayed data. Group numbers are displayed in numeric order, beginning with the lowest number and continuing to the highest one.
- **Number of CO** – The number of CO line in the group
- **Analysis Start Hour** – The time (24-hour mode) taking the measurement.
- **Total Usage** – Total usage for all CO lines in the CO group. It represents the total time that the CO lines are busy during the measurement period. Total usage measures each time when a CO line is seized for use by an incoming call or an outgoing call.
- **Total Attempt** – The number of incoming and outgoing call attempt in the CO group
- **Incoming Attempt** – The number of incoming call attempt in the CO group.
- **Outgoing Attempt** – The number of outgoing call attempt in the CO group.
- **Group Overflow** – The number of calls offered to a CO group that are not carried. Rejected calls for authorization will not be included.
- **Percentage All CO Busy** – The percentage of time that all CO lines in the CO group are simultaneously in use during the time interval.
- **Percentage Fail to Attempt Outgoing** – The percentage of offered calls that are not carried on the CO group. It will not be included unauthorized calls which are denied on the CO group or uncompleted calls carried on the CO group (unanswered calls).
- **CO Traffic Hourly Report**—Analysis of CO traffic patterns by showing per hour CO traffic for the past 24 hours.

### Operation

To print the CO Traffic Summary Report at main Attendant, perform the following Steps:

1. Press the **[TRANS/PGM]** button.
2. Dial 0128.
3. Select Measurement Time type.
4. Press the **[HOLD/SAVE]** button.

To print the CO Traffic Hourly Report at main Attendant:

1. Press the **[TRANS/PGM]** button.
2. Dial 0129.
3. Enter the CO group number.
4. Press the **[HOLD/SAVE]** button.

*Ex.)*

```
==========================================================================
Site Name:
Report Type : CO Group Summary Report - Yesterday Total
Date: 02/12/04 13:15
==========================================================================
  Peak Hour For All CO: 10:00
  Grp   Num   Anal    Total    Total    Inc.     Out.    Grp     %     %
  No    COs   Hour    Usage    Seize    Seize    Seize   Ovfl    ACB   FAO
   1     62   --:--    1319     1050     269      781     0       0     ---
```

## 2.18.4 Hardware Unit Reports

### Description

ipLDK system supports the following report to analyze the usage of HW unit resources of the system such as Tone Receiver and VMIB.

**H/W Usage Summary Report—**Analysis of whether the system has enough H/W unit resources such as DTMF Receiver, VMIB, and CPTU by showing the statistics. Choose one of the following: time duration, today's peak time, yesterday's peak time, last hour, yesterday's total and today's total. It provides the following information fields:

- **Type** – The type of H/W unit being measured.
- **Number of Unit** – The total number of installed H/W unit.
- **Analysis Start Hour** – The starting time of the last hour or the hour with the highest Peak Req. measurement.
- **Total Requests** – The system-wide total number of requests, by call processing for DTMF, CPTU, VMIB during the listed hour. It is calculated by incrementing a counter for each request.
- **Total Demand** – The system-wide total number of requests that are denied because there is no available H/W unit during the listed hour.

### Operation

To print the H/W Unit Usage Summary Report at main Attendant::

1. Press the **[TRANS/PGM]** button.
2. Dial 0127.
3. Select Measurement Time type.
4. Press the **[HOLD/SAVE]** button.

*Ex.)*

**==========**

**Site Name:**
**Report Type : H/W Unit Usage Summary Report - Yesterday Total**
**Date: 02/12/04 13:15**

**==========**

| Unit Type | Num Unit | Anal Hour | Total Req | Total Denied |
|---|---|---|---|---|
| VMIB | 4 | --:-- | 27 | 0 |
| DTMF | 13 | --:-- | 27 | 0 |
| CPTU | 12 | --:-- | 27 | 0 |

# 2.19 Software Upgrade

**Description**
The ipLDK MPB software can be upgraded by ipLDK upgrade program in PC. In order to upgrade by ipLDK upgrade program, PC and ipLDK system should be connected through SERIAL/ISDN/LAN/MODEM interface. Then the software file in the PC is sent to the system at first and the MPB software is upgraded. The Figure 2.19 describes that there are 4 types of the connection of ipLDK system and PC for ipLDK MPB software - SERIAL/ISDN/LAN/MODEM.

*Ex.)*

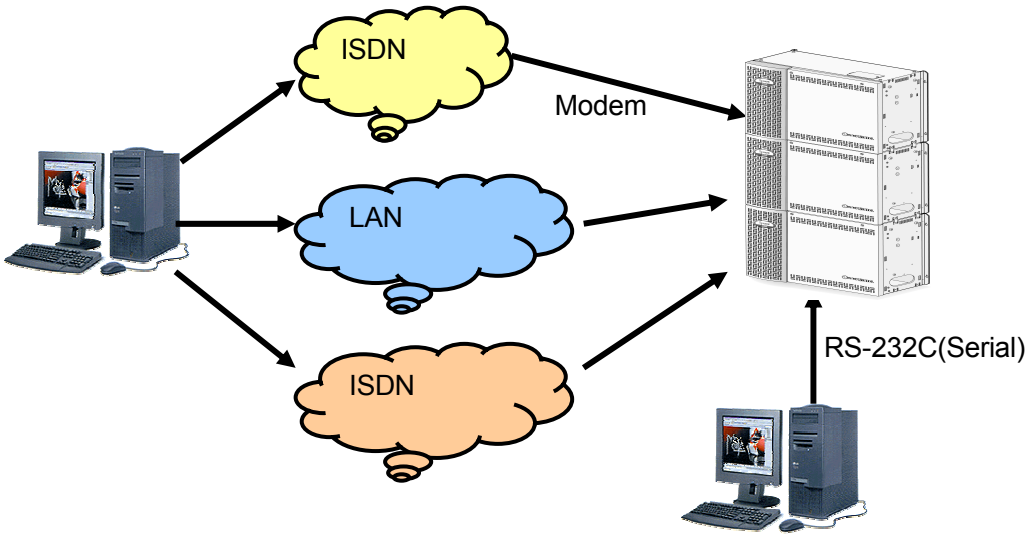



**Figure 2.19 Connection for Software Upgrade**

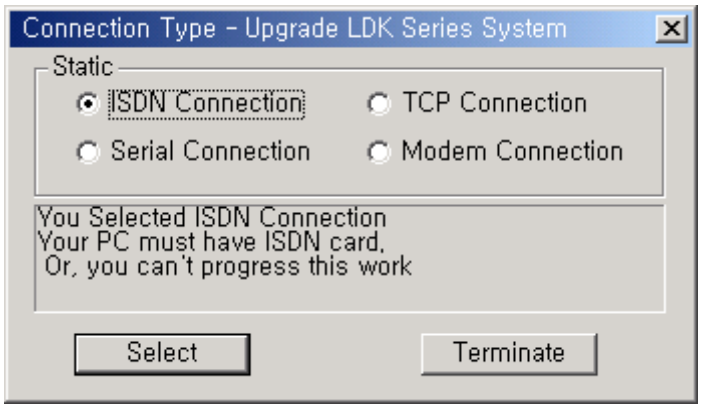
## 2.19.1 ISDN

**Description**
The ipLDK MPB software can be upgraded through ISDN BRI line interface by ipLDK upgrade program in remote PC.

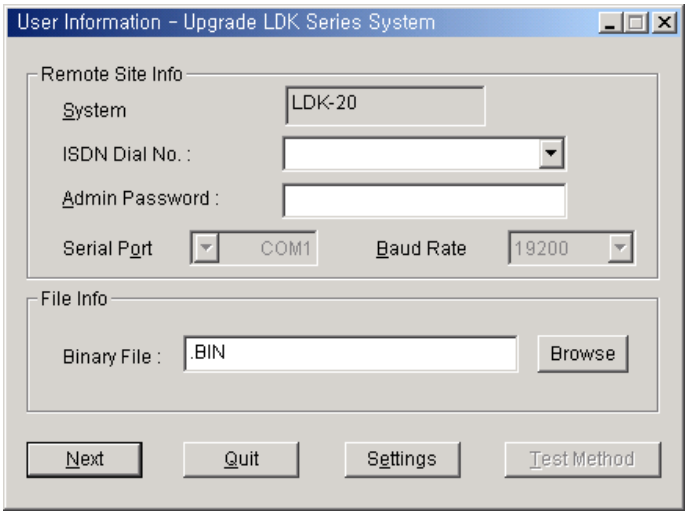
**Operation**

1. Connect the ISDN phone line to the PC ISDN card.
2. Connect the ISDN T-interface line to a BRI port of ipLDK system.
3. Run ipLDK PC Upgrade program.
4. Select the ipLDK system to be upgraded and click on the 'OK' button.

5. Set the port type to “ISDN Connection”. And press the ‘Select’ button.




6. Enter the ISDN phone number, path of the binary file, and the password for upgrade. And press the ‘Next’ button.




7. In the ‘Next’ window, press ‘Start’ button. You can see the ipLDK MPB software upgrade process.
8. When the ROM file sending is finished in the PC, ipLDK will erase the previous ROM data and start to fill ipLDK ROM area with the received ROM file.

**Condition**

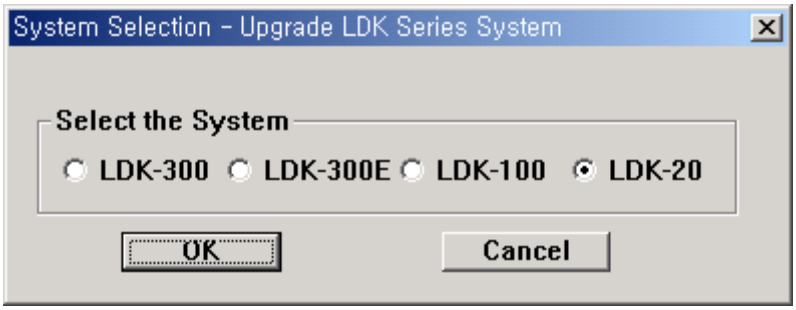
- The ISDN card in the PC should support CAPI (Common-ISDN Application Programming Interface) 2.0 which is a standard interface specification devised to use ISDN channels in the PC. Also, it should support HDLC as a B channel protocol. And “CAPI2032.DLL” should be found in the “System” directory of “Windows” which means that the CAPI driver for Windows is properly installed.
- If the line is DID type, you should make a call to any station or station group except ISDN station (S port). Only the call in this case will be accepted by ipLDK system.
- When the line is released while upgrading process, just dial the phone number again. If the line was properly disconnected, it will be connected immediately.
- While upgrading process, other features do not work in the system.
- When the ipLDK MPB software upgrade is finished without completing, you can retry to upgrade by doing the whole process again.
- If the ROM files you want to send are invalid, ipLDK MPB software upgrade will not be started.
- In ipLDK-100/300/300E, DRAM should be installed on the MPB to use this feature.

## 2.19.2 LAN

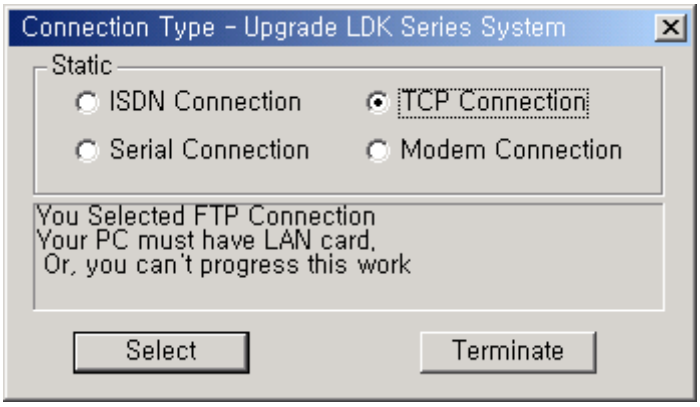
**Description**
The ipLDK MPB software can be upgraded through LAN interface by ipLDK upgrade program in a remote PC.

**Operation**
To upgrade the LAN software, perform the following Steps:

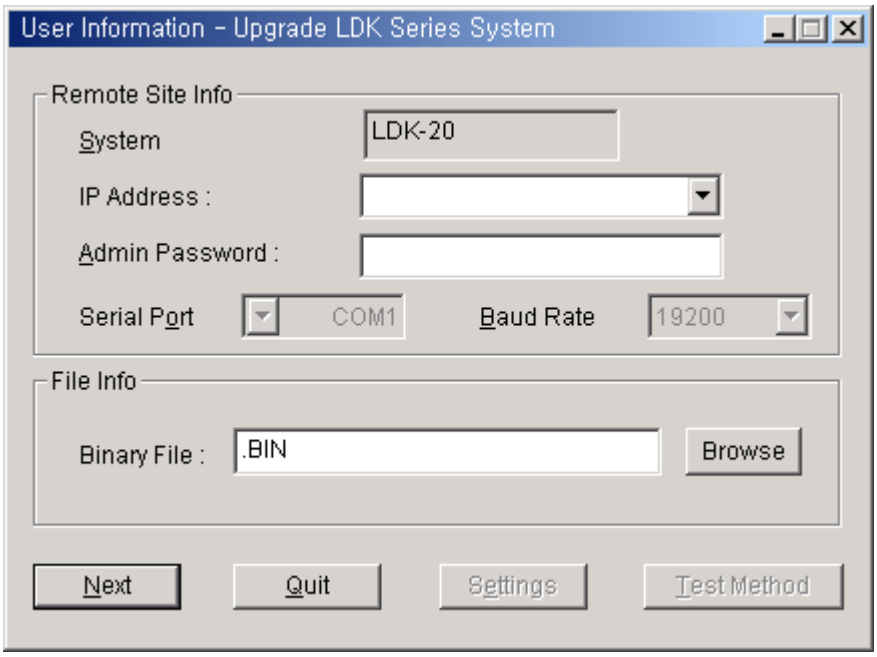
1. Connect the LAN cable to the PC LAN-card.
2. Run the ipLDK PC Upgrade program.
3. Select the ipLDK system to be upgraded.
4. Click on the OK button.




5. Select the port type TCP Connection.
6. Click on the Select button.




7. Enter the ipLDK IP Address, Admin Password, and path of the Binary File.




8. Click the Next button.
9. Click on the Start button; the ipLDK MPB software upgrade will begin.
10. When the ROM file is finished downloading, the ipLDK System will erase the previous ROM data and fill the ipLDK ROM area with the new ROM file.

**Condition**

- When the line is released while upgrading process, just dial the phone number again. If the line was properly disconnected, it will be connected immediately.
- While upgrading process, other features do not work in the system.
- When the ipLDK MPB software upgrade is finished without completing, you can retry to upgrade by doing the whole process again.
- If the ROM files you want to send are invalid, ipLDK MPB software upgrade will not be started.
- In ipLDK-100/300/300E, DRAM should be installed on the MPB to use this feature.

**Admin Programming**

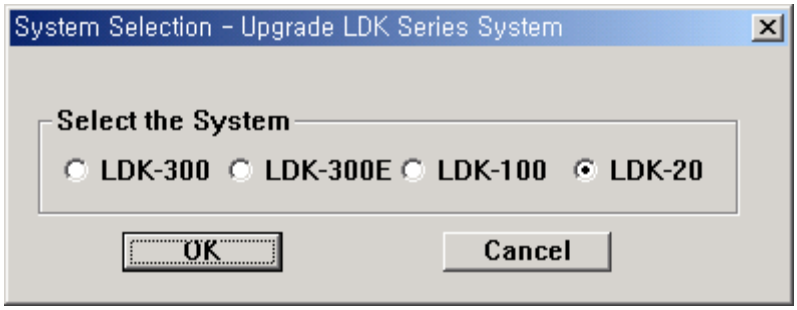
■Refer to **ipLDK Hardware Description and Installation Manual**, IP Setting for MPB (PGM 108)

## 2.19.3 SERIAL (COM port)

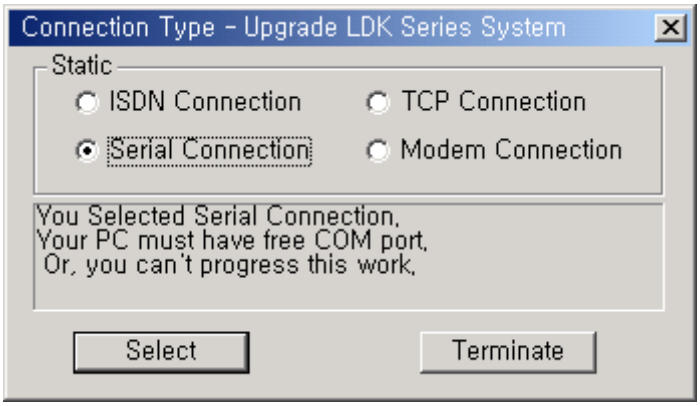
**Description**
The ipLDK MPB software can be upgraded through RS-232C interface by ipLDK upgrade program in the PC.

**Operation**
To upgrade the SERIAL (COM port), perform the following Steps:

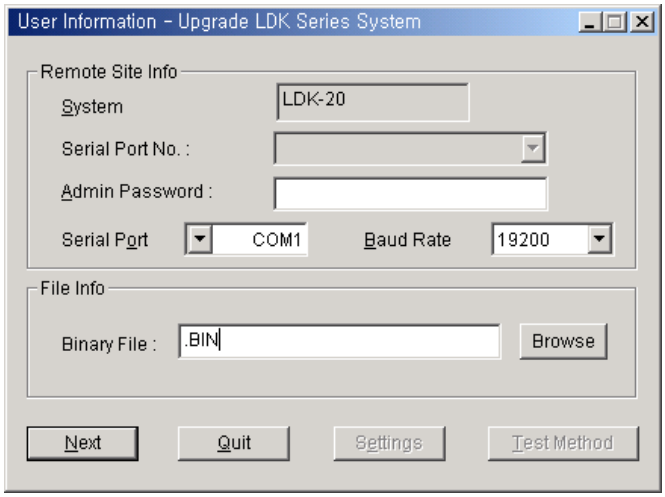
1. Connect the RS-232C cable between ipLDK system and PC.
2. Run ipLDK PC Upgrade program.
3. Select the ipLDK system to be upgraded.




4. Click on the OK button.
5. Select the port type Serial Connection.
6. Click on the Select button.




7. Enter the Serial Port Number, Admin Password, and select the serial port Baud Rate.
8. Click on the Next button.




9. Click on the Start button; the ipLDK MPB software upgrade will begin.
10. When the ROM file is finished downloading, the ipLDK System will erase the previous ROM data and start to fill ipLDK ROM area with the downloaded ROM file.

## Condition

- While upgrading process, other features do not work in the system.
- When the ipLDK MPB software upgrade is finished without completing, you can retry to upgrade by doing the whole process again.
- If the ROM files you want to send are invalid, ipLDK MPB software upgrade will not be started.
- Serial port should be connected to COM port 2 in the MPB.
- In ipLDK-100/300/300E, DRAM should be installed on the MPB to use this feature.

## Admin Programming

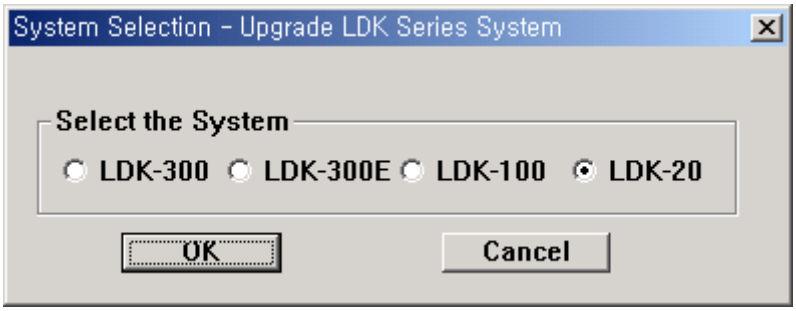
■RS-232C Port Setting (PGM 174)

## 2.19.4 MODEM

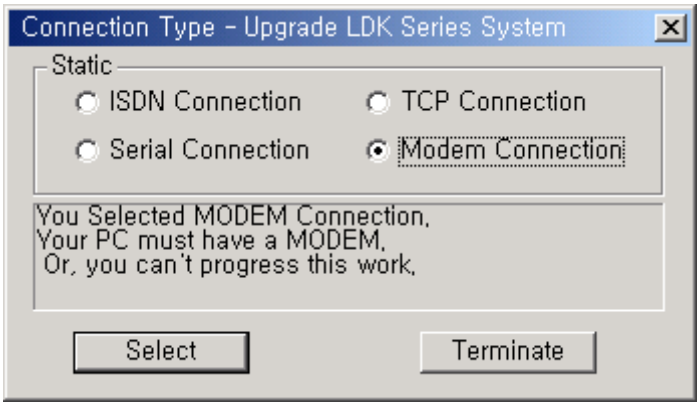
**Description**
The ipLDK MPB software can be upgraded through Modem interface by ipLDK upgrade program in remote PC.

**Operation**
To upgrade the Modem software, perform the following Steps:

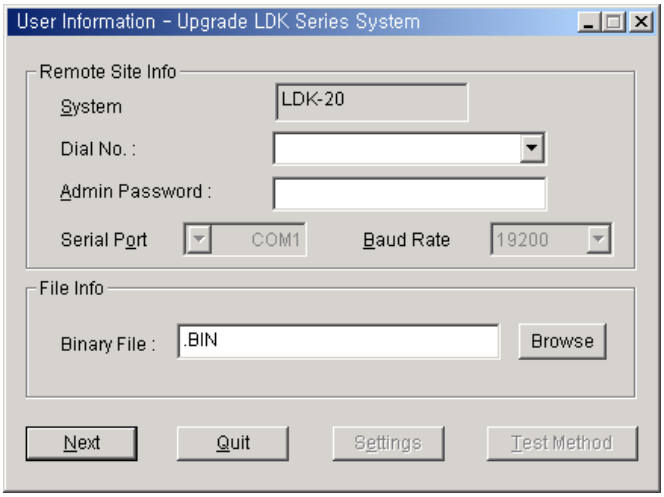
1. Run the ipLDK PC Upgrade program.
2. Select the ipLDK System to be upgraded.
3. Click on the OK button.




4. Select the port type Modem Connection.
5. Click on the Select button.




6. Enter the ipLDK Dial No., the Admin Password, and the path of the Binary File.



7. Click on the Next button.
8. Select your Modem Type in the Modem Configuration dialog box.
9. Click on the Start button; the ipLDK MPB software upgrade will begin.
10. When the ROM file is finished downloading, the ipLDK System will erase the previous ROM data and start to fill ipLDK ROM area with the received ROM file.

**Condition**

- When the line is released while upgrading process, retry the ipLDK PC Upgrade program again.
- While upgrading process, other features do not work in the system.
- When the ipLDK MPB software upgrade is finished without completing, you can retry to upgrade by doing the whole process again.
- If the ROM files you want to send are invalid, ipLDK MPB software upgrade will not be started.
- In ipLDK-100/300/300E, DRAM should be installed on the MPB to use this feature.

**Admin Programming**

■Modem Assignment – ASC Device (PGM 170)

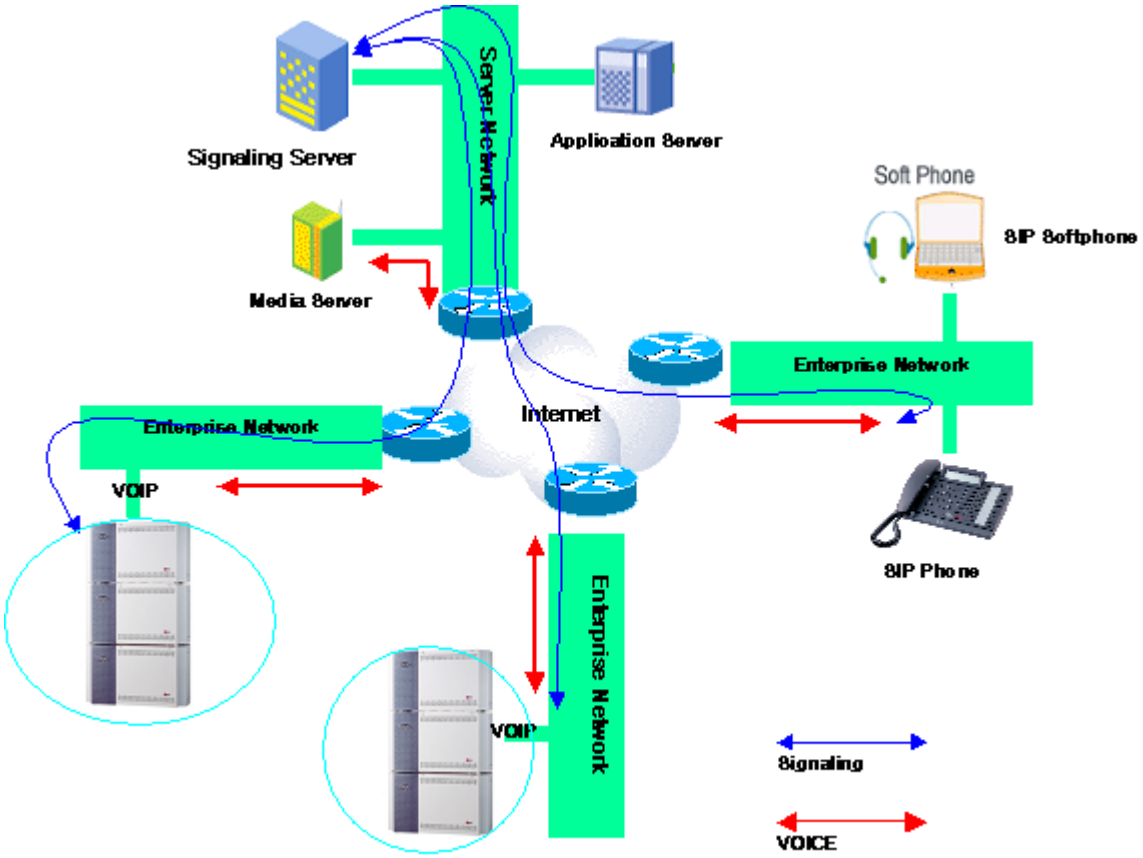
# 2.20 SIP

## Description

There are many applications of the Internet that require the creation and management of a session, where a session is considered an exchange of data between associations of participants. The implementation of these applications is complicated by the practices of participants: users may move between endpoints, they may be addressable by multiple names, and they may communicate in several different media – sometimes simultaneously. Numerous protocols have been authored that carry various forms of real-time multimedia session data such as voice, video, or text messages. The Session Initiation Protocol (SIP) works in concert with these protocols by enabling Internet endpoints (called user agents) to discover one another and to agree on a characterization of a session they would like to share. For locating prospective session participants, and for other functions, SIP enables the creation of an infrastructure of network hosts (called proxy servers) to which user agents can send registrations, invitations to sessions, and other requests. SIP is an agile, general-purpose tool for creating, modifying, and terminating sessions that works independently of underlying transport protocols and without dependency on the type of session that is being established.

SIP is an application-layer control protocol that can establish, modify, and terminate multimedia sessions (conferences) such as Internet telephony calls. SIP can also invite participants to already existing sessions, such as multicast conferences. Media can be added to (and removed from) an existing session. SIP transparently supports name mapping and redirection services, which supports personnel mobility – users can maintain a single externally visible identifier regardless of their network location.

## Network Diagram



## 2.20.1 Incoming Call

**Description**

ipLDK system can receive incoming call by two methods. Two methods are TRUNK mode and REGISTER mode. TRUNK mode finds user agent IP address by proxy sever configuration. REGISTER mode receives incoming call using REGISTER method(2.21.3). The rule of SIP Incoming Call is same as 2.1 How To Get Incoming Call.

**Operation**

*Example*

- Trunk mode : Make Station 1000~1009 receive incoming call from SIP server(sip.trunk.com)
  1. Set Station number as 1000~1009 at ADMIN 105.
  2. Set CO Service type as DID at ADMIN 140.
  3. Set COLP Table Index as 00 at ADMIN 143.
  4. Set CLIP Table Index as 00 at ADMIN 143.
  5. Set Call Type as SUBSCRIBER at ADMIN 143.
  6. Set DID CONV Type as 1 at ADMIN 143.
  7. Set ISDN Enblock Send as ON at ADMIN 143.
  8. Set Networking CO Line Type as SIP at ADMIN 322.
  9. Set VOIB Mode as SIP at ADMIN 340.
  10. Set Proxy Server Address as sip.trunk.com at SIP Attribute 1.
  11. Set Domain as sip.trunk.com at SIP Attribute 1.

  => When there's an incoming call, the Station 1000~1009 can receive call by SIP URI number.

- REGISTER mode : Make Station 1000 receive incoming call from SIP server(sip.reg.com)
  1. Set Station number as 1000 at ADMIN 105.
  2. Set SIP User ID Table Index as 1 at SIP Attribute 2.
  3. Set CO Service type as DID at ADMIN 140.
  4. Set COLP Table Index as 00 at ADMIN 143.
  5. Set CLIP Table Index as 00 at ADMIN 143.
  6. Set Call Type as SUBSCRIBER at ADMIN 143.
  7. Set DID CONV Type as 1 at ADMIN 143.
  8. Set ISDN Enblock Send as ON at ADMIN 143.
  9. Set Networking CO Line Type as SIP at ADMIN 322.
  10. Set VOIB Mode as SIP at ADMIN 340.
  11. Set Proxy Server Address as sip.reg.com at SIP Attribute 1.
  12. Set Domain as sip.trunk.com at SIP Attribute 1.
  13. Set User ID as 1000@sip.reg.com at SIP Attribute 2.
  14. Set Contact Number as 1000 at SIP Attribute 2.
  15. Set User ID Register as ON at SIP Attribute 2.
  16. Set User ID Usage as ON at SIP Attribute 2.

  => When there's an incoming call, the Station 1000 can receive call by registration.

**Condition**

1. For using SIP CO Line, VOIB Mode should be SIP or Dual mode.
2. Both NOMAL and DID CO service type supported.
3. MSN service applied in SIP CO Line.
4. CLIP and COLP are applied in SIP CO Line.
5. Mobile Extension features applied by SIP CO Line.

**Admin Programming**

- CO Service Type **4.2.1 (PGM 140)**
- COLP Table Index **4.2.4.1 (PGM 143 – FLEX 1)**
- CLIP Table Index **4.2.4.2 (PGM 143 – FLEX 2)**
- Call Type **4.2.4.3 (PGM 143 – FLEX 3)**
- DID CONV Type **4.2.4.4 (PGM 143 – FLEX 4)**
- DID Remove Number **4.2.4.5 (PGM 143 – FLEX 5)**
- ISDN Enblock Send **4.2.4.6 (PGM 143 – FLEX 6)**
- CLIP/COLP Table **4.8.2 (PGM 201)**
- Networking CO Line Type **4.12.3.2 (PGM 322 – FLEX 2)**
- VOIB Mode **4.13.1.12 (PGM 340 – FLEX 12)**
- SIP Attribute 1 **(PGM 500)**
- SIP Attribute 2 **(PGM 501)**

## 2.20.2 Outgoing Call

**Description**

ipLDK system makes Outgoing Call same as rule of 2.2 How To Access Outgoing Call.

**Operation**

*Example*

ADMIN setting is same as 2.12.1 Incoming Call Example.

1. Lift Handset or press the **[MON]** button.
2. Press the desired CO Line, **{POOL}** button, or **{LOOP}** button.
3. Or, dial the individual CO Line access code, CO group access code, or the first CO Line access code from the accessible group.
4. Press destination number and press '#'. If not press '#', call sent by Enblock Digit Timer.

**Condition**

1. For using SIP CO Line, VOIB Mode should be SIP or Dual mode.
2. TRUNK and REGISER mode use same method.
3. Both NOMAL and DID CO service type supported.
4. MSN service applied in SIP CO Line.
5. CLIP and COLP are applied in SIP CO Line.
6. Mobile Extension features applied by SIP CO Line.
7. SIP CO Line must use Enblock Send feature.

**Admin Programming**

- CO Service Type **4.2.1 (PGM 140)**
- COLP Table Index **4.2.4.1 (PGM 143 – FLEX 1)**
- CLIP Table Index **4.2.4.2 (PGM 143 – FLEX 2)**
- Call Type **4.2.4.3 (PGM 143 – FLEX 3)**
- DID CONV Type **4.2.4.4 (PGM 143 – FLEX 4)**
- DID Remove Number **4.2.4.5 (PGM 143 – FLEX 5)**
- ISDN Enblock Send **4.2.4.6 (PGM 143 – FLEX 6)**
- Enblock Digit Timer **4.5.3.10 (PGM 182 – FLEX 10)**
- CLIP/COLP Table **4.8.2 (PGM 201)**
- Networking CO Line Type **4.12.3.2 (PGM 322 – FLEX 2)**
- VOIB Mode **4.13.1.12 (PGM 340 – FLEX 12)**

- SIP Attribute 1 **(PGM 500)**
- SIP Attribute 2 **(PGM 501)**

## 2.20.3 Register

**Description**

The REGISTER method is used by a user agent notify a SIP network of its current Contact URI (IP address) and the URI that should have requests routed to this CONTACT. SIP registration bears some similarity to cell phone registration on initialization. Registration is not required to enable a user agent to use a proxy server for outgoing calls. It is necessary, however, for a user agent to register to receive incoming calls from proxies that serve that domain unless some non-SIP mechanism is used by the location service to populate the SIP URIs and Contacts of end-points.

**Operation**

*Example*

1. Set Station number as 1000 at ADMIN 105.
2. Set SIP User ID Table Index as 1 at SIP Attribute 2.
3. Set CO Service type as DID at ADMIN 140.
4. Set COLP Table Index as 00 at ADMIN 143.
5. Set CLIP Table Index as 00 at ADMIN 143.
6. Set Call Type as SUBSCRIBER at ADMIN 143.
7. Set DID CONV Type as 1 at ADMIN 143.
8. Set ISDN Enblock Send as ON at ADMIN 143.
9. Set Networking CO Line Type as SIP at ADMIN 322.
10. Set VOIB Mode as SIP at ADMIN 340.
11. Set Proxy Server Address as sip.reg.com at SIP Attribute 1.
12. Set Domain as sip.trunk.com at SIP Attribute 1.
13. Set User ID as 1000@sip.reg.com at SIP Attribute 2.
14. Set Contact Number as 1000 at SIP Attribute 2.
15. Set User ID Register as ON at SIP Attribute 2.
16. Set User ID Usage as ON at SIP Attribute 2.

=> Station 1000 send REGISTER message after reset system.

**Condition**

1. If you set User ID Provision as Register, REGISTER method will be sent after initialization.
2. One SIP User ID cab be shared many extensions. In this method, all extensions can make call with only one registration.

**Admin Programming**

- CO Service Type **4.2.1 (PGM 140)**
- COLP Table Index **4.2.4.1 (PGM 143 – FLEX 1)**
- CLIP Table Index **4.2.4.2 (PGM 143 – FLEX 2)**
- Call Type **4.2.4.3 (PGM 143 – FLEX 3)**
- DID CONV Type **4.2.4.4 (PGM 143 – FLEX 4)**
- DID Remove Number **4.2.4.5 (PGM 143 – FLEX 5)**
- ISDN Enblock Send **4.2.4.6 (PGM 143 – FLEX 6)**
- Enblock Digit Timer **4.5.3.10 (PGM 182 – FLEX 10)**
- CLIP/COLP Table **4.8.2 (PGM 201)**
- Networking CO Line Type **4.12.3.2 (PGM 322 – FLEX 2)**
- VOIB Mode **4.13.1.12 (PGM 340 – FLEX 12)**

- SIP Attribute 1 **(PGM 500)**
- SIP Attribute 2 **(PGM 501)**

## 2.20.4 Private Extension

**Description**

This Private Extension enable a network of trusted SIP servers to assert the identity of end users or end systems, and to convey indications of end-user requested privacy. The use of these extensions is only applicable inside a 'Trust Domain' as defined in Short term requirements for Network Asserted Identity. Nodes in such Trust Domain are explicitly trusted by its users and end-system to publicly assert the identity of each party, and to be responsible for withholding that identity outside of the Trust Domain when privacy is requested.

**Operation**

*Example*

1. Set Station number as 1000 at ADMIN 105.
2. Set SIP User ID Table Index as 1 at SIP Attribute 2.
3. Set CO Service type as DID at ADMIN 140.
4. Set COLP Table Index as 00 at ADMIN 143.
5. Set CLIP Table Index as 00 at ADMIN 143.
6. Set Call Type as SUBSCRIBER at ADMIN 143.
7. Set DID CONV Type as 1 at ADMIN 143.
8. Set ISDN Enblock Send as ON at ADMIN 143.
9. Set Networking CO Line Type as SIP at ADMIN 322.
10. Set VOIB Mode as SIP at ADMIN 340.
11. Set Proxy Server Address as sip.reg.com at SIP Attribute 1.
12. Set Domain as sip.trunk.com at SIP Attribute 1.
13. Set Asserted ID(or Remote Party ID) Usage as ON at SIP Attribute 1.

=> When there's an outgoing call, the INVITE message include P-Asserted-Identify(or Remote-Party-ID) header field.

**Condition**

1. P-Asserted-Identity and Remote-Party-ID can't used at the same time.
2. P-Asserted-Identity enable 'Id' Privacy Type at SIP Attribute 2 User Privacy.
3. Remote-Party-Id enable 'Privacy' at SIP Attribute 2 User Privacy. If this value is set, the INVITE message include 'Privacy=full'. If this value is off, the INVITE message include 'Privacy=off'.
4. This Private Extension makes URI by the Station(not by User ID at SIP Attribute 2).

**Admin Programming**

- CO Service Type **4.2.1 (PGM 140)**
- COLP Table Index **4.2.4.1 (PGM 143 – FLEX 1)**
- CLIP Table Index **4.2.4.2 (PGM 143 – FLEX 2)**
- Call Type **4.2.4.3 (PGM 143 – FLEX 3)**
- DID CONV Type **4.2.4.4 (PGM 143 – FLEX 4)**
- DID Remove Number **4.2.4.5 (PGM 143 – FLEX 5)**
- ISDN Enblock Send **4.2.4.6 (PGM 143 – FLEX 6)**
- Enblock Digit Timer **4.5.3.10 (PGM 182 – FLEX 10)**
- CLIP/COLP Table **4.8.2 (PGM 201)**
- Networking CO Line Type **4.12.3.2 (PGM 322 – FLEX 2)**
- VOIB Mode **4.13.1.12 (PGM 340 – FLEX 12)**
- SIP Attribute 1 **(PGM 500)**
- SIP Attribute 2 **(PGM 501)**

LG-NORTEL

ipLDK

# ipLDK-20/100/300/300E

## Admin. Programming Manual

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# *Revision History*

| ISSUE | DATE | Contents of Changes | REMARK |
|---|---|---|---|
| 1.0 | Sep. 2008 | Initial release for ipLDK-20/100/300/300E V38 | |

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# 1. INTRODUCTION

This Programming Manual is designed to provide general system information related to ADMIN Programming, using a DKTU and PC for the ipLDK-*20/100/300/300E*. This manual contains the following sections.

## *1.1 Manual Usage*

**Section 2 Admin Programming Preparation**
A brief overview to ensure the system is appropriately prepared for Admin Programming. More detailed preparation of pre-programming is covered in the **ipLDK-*20/100/300/300E* Installation Manual**.

**Section 3 ADMIN Programming**
This section focuses on ADMIN Programming for features. A brief overview is included that explains the function of each button used for non-factory installed functions that need to be programmed using ADMIN. More detailed description and operation instructions are covered in the **ipLDK-*20/100/300/300E* Feature Description and Operation Manual**.

**Section 4 Quick ADMIN Programming Tables**
This section provides a quick reference ADMIN Programming table for use by those familiar with the system.

# 2. ADMIN PROGRAMMING PREPARATION

The ipLDK System can be programmed to meet each customer's individual needs. Elements of Basic Admin Pre-programming should have been covered in the *ipLDK*-20B Hardware Description and Installation Manual. Please refer to that manual to ensure you are prepared for Admin Programming of your *ipLDK*-20B System.

***NOTE—****All programming should be done at Station 100 (Station port #00) using KD-36D, LKD-30/44 or LDP-7024D digital key telephone. The System cannot be programmed with a large LCD DKTU.*

The following Figure 2.0 is provided as a reference during Admin Programming. It displays the LDP-7024D buttons commonly used for programming the System. A more detailed description of these buttons is included in the **LDP User Guide**.

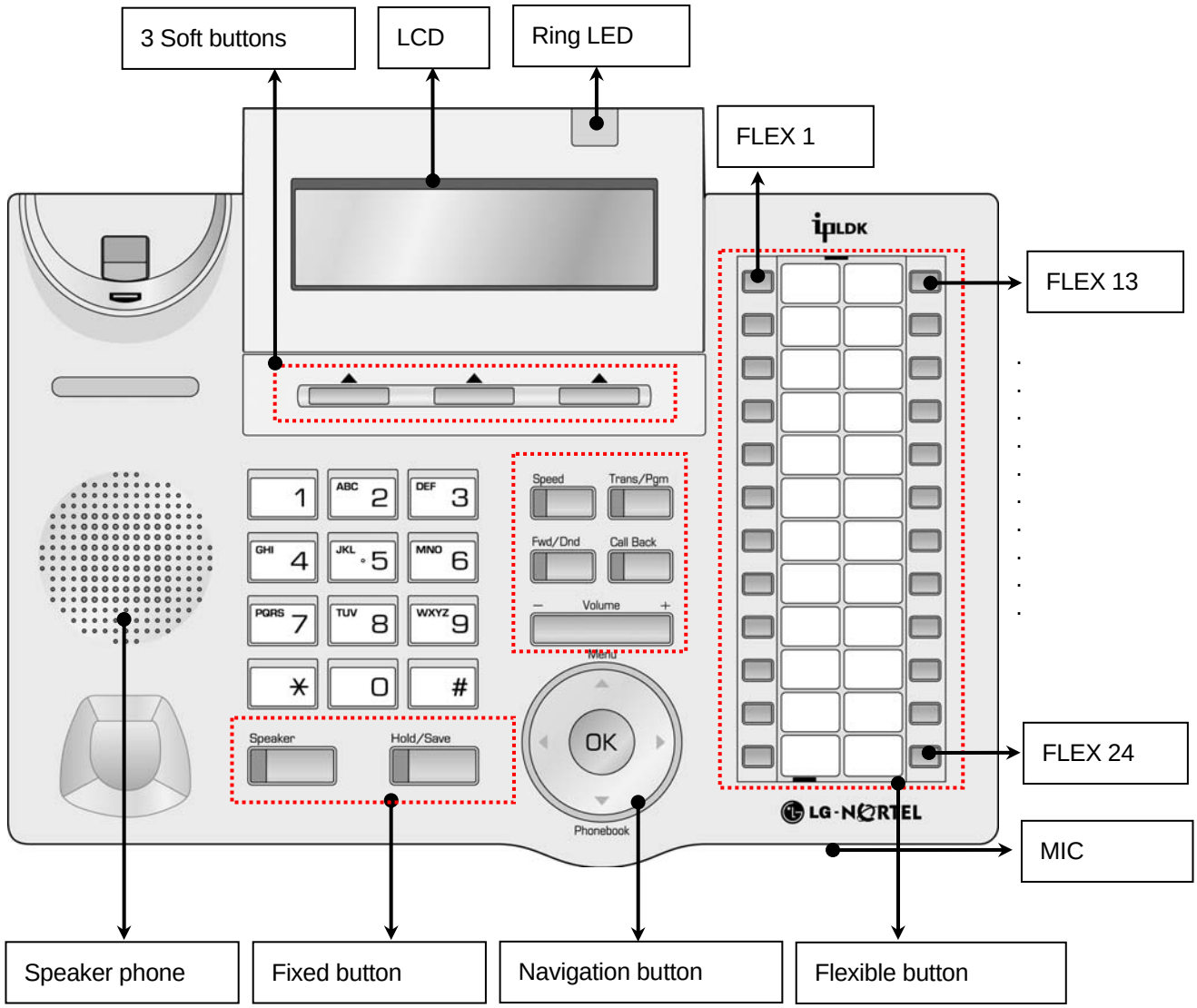


**Figure 2.0 Keyset Button Diagram**

## 2.1 Entering Programming Mode

To enter Programming Mode, perform the following Steps:

1. Lift the handset.
   OR
2. Press the **[MON]** button on the ADMIN station. The ICM dial tone should be heard.
3. Press the **[TRANS/PGM]** button and dial ✻#.
4. Confirmation tone should be heard.
5. Enter the ADMIN password if a password has been set.
6. A confirmation tone should be heard indicating that the station is in ADMIN Programming mode.
7. Each program is accessed by pressing the **[TRANS/PGM]** button, the following should display:

   ENTER PGM NUMBER

8. Dial the desired three-digit program number. If an error is made while entering data, the **[TRANS/PGM]** button will return to the previous status.

***NOTE—****To return to the parent state while ADMIN programming, press the **[CONF]** button. Pressing the **[CONF]** button clears temporary data fields.*

The following Table is frequently used in ADMIN Programming procedures. When entering each range, refer to the table, as the range is not always mentioned in the procedures.

**System Range**

| System | Station Range | CO Range | CO Line Group Range |
|---|---|---|---|
| ipLDK-300E | 1000-1599 | 001-400 | 01-73 |
| ipLDK-300 | 100-399 | 001-200 | 01-73 |
| ipLDK-100 | 100-227 | 01-40 | 00-25 |
| ipLDK-20 | 10-37 | 01-16 | 00-09 |

### 2.1.1 Permanent Update Procedure

To accept changes while programming, perform the following Steps:

1. Press the **[HOLD/SAVE]** button when all changes have been entered to permanently store data.
2. A confirmation tone should be heard when pressing the **[HOLD/SAVE]** button if all data was entered correctly. If there were any errors in the entry, then an error tone is presented and data is not stored in the permanent memory.

### 2.1.2 Resetting the System

To reset the system, perform the following Steps:

1. Enter **[PGM]**.
2. Press **450**.
3. Press FLEX 15.
4. Press the **[HOLD/SAVE]** button.

## *2.2 Pre-programming*

Pre-programming for the following should have been done immediately following Installation of the ipLDK System (refer to ***Installation Manual***):

- Location PGM-Nation Code
- Site Name (PGM100)
- Numbering Plans
- System IP Settings

# 3. ADMIN PROGRAMMING

## 3.1 Station (PGM 110 – 131)

In Station Programming, the values of each Station can be customized using program numbers. When programmed using Station Ranges, all stations within that range will have the same programmed values.

### 3.1.1 STATION & DSS/DLS MAP ID (PGM 110)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **110.**
3. Enter the appropriate *Station Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 110 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Station ID Assignment | Then Station ID can be changed to the desired value which is different from the default value (i.e., normal DKTU /normal SLT) | + FLEX1 + **01** (Station ID) + **[HOLD/SAVE]** | VALUES –<br>ipLDK-20<br>01 = DKTU<br>05 = ICM BOX<br>06 = WHTU<br>07 = SLT(DTMF)<br>08 = SLT(PULSE)<br>09 = RESERVED<br>10 = RESERVED<br>11 = ISDN Phone<br>12 = SLT – CID(FSK)<br>13 = SLT – CID(DTMF)<br>14 = IP PHONE<br>ipLDK-100<br>01 = DKTU<br>05 = ICM BOX<br>06 = WHTU<br>07 = SLT(DTMF)<br>08 = SLT(PULSE)<br>09 = SLT(DTMF)-MSG<br>10 = SLT(PULSE)-MSG<br>11 = ISDN PHONE<br>12 = SLT – CID(FSK)<br>13 = SLT – CID(DTMF)<br>14 = IP PHONE<br>ipLDK-300/300E<br>01 = DKTU<br>10 = ICM BOX<br>11 = WHTU<br>12 = SLT(DTMF)<br>13 = SLT(PULSE)<br>14 = SLT(DTMF)-MSG<br>15 = SLT(PULSE)-MSG<br>16 = ISDN PHONE<br>17 = SLT – CID(FSK)<br>18 = SLT – CID(DTMF)<br>19 = IP PHONE |

| PGM 110 | Description | Procedure | COMMENTS |
|---|---|---|---|
| DSS/DLS | One station can have up to 3 sequentially numbered multiple DSS/DLS maps. | **+ FLEX1** + **02** (Station ID) + **FLEX2** + *Station Number* +**[HOLD/SAVE]** | VALUES –<br>ipLDK-20/100<br>02 = DSS MAP 1<br>03 = DSS MAP 2<br>04 = DSS MAP 3<br><br>ipLDK-300/300E<br>02 = DSS MAP 4<br>03 = DSS MAP 5<br>04 = DSS MAP 6<br>02 = DSS MAP 7<br>03 = DSS MAP 8<br>04 = DSS MAP 9 |

**Initial Button Configurations for DSS/DLS Map**

| ITEM | DEFAULT | | REMARK |
|---|---|---|---|
| DSS/DLS MAP 1 | Buttons 1 to 12 | | |
| | Button 1: Intrusion | Button 2: All Call Page | |
| | Button 3: Call Park 01 | Button 4: Station Group 1 | |
| | Button 5: Camp-On | Button 6: Internal All Call Page | |
| | Button 7: Call Park 02 | Button 8: Station Group 2 | |
| | Button 9: Group Call Pickup Button | 10: External All Call Page | |
| | Button 11: Call Park 03 | Button 12: Station Group 3 | |
| | Buttons 13 to 48: Station Ports 100-135 | | |
| DSS/DLS MAP 2 | Station Ports 10 – 37(ipLDK-20)<br>Station Ports 136-183 (ipLDK-100/300/300E) | | |
| DSS/DLS MAP 3 | BLANK (ipLDK-20)<br>Station Ports 184 – 231 for ipLDK-300/300E (184-227 for ipLDK-100) | | |
| DSS/DLS MAP 4 | Station Ports 232 – 279 | | ipLDK-300/300E Only |
| DSS/DLS MAP 5 | Station Ports 280 – 327 | | |
| DSS/DLS MAP 6 | CO Line 01 – 48 | | |
| DSS/DLS MAP 7 | CO Line 49 – 96 | | |
| DSS/DLS MAP 8 | CO Line 97 – 144 | | |

## 3.1.2 STATION ATTRIBUTES I (PGM 111)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **111.**
3. Enter the appropriate *Station Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 111 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Auto Speaker Select | If this value is set to ON, the Station User can access a CO line or make a DSS call by pressing the appropriate {CO} or {DSS} button without lifting handset or pressing the [MON] button. | + FLEX1 + **0** (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Call Forward | If this value is set to ON, an incoming call can be forwarded to the other destination. | + FLEX2 + **0** (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| DND | If this value is set to ON, an incoming call can be denied. | + FLEX3 + **0** (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Data Line Security | If this value is set to ON, override and camp-on from other stations are prohibited when this station is busy. | + FLEX4 + **1** (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

| PGM 111 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Howling Tone (SLT) | If this value is set to ON, System gives a howling (loud error) tone when phone is in the off-hook state without action for an extended period of time. | + FLEX5 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Intercom Box Signaling | If this value is set to ON, Station can receive an intercom box signal. | + FLEX6 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| No Touch Answer | If this value is set to ON, the station can respond to a transferred CO call automatically when station mode is Hands-free or Privacy mode. | + FLEX7 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Page Access | If this value is set to ON, Station can page another Station. | + FLEX8 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Ring Type | If this value is not 0 (OFF) the selected ring type is heard at the called party Station of an intercom call. | + **FLEX9** + **1** (Ring Type) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = Ring Type 2 = Ring Type 3 = Ring Type 4 = Ring Type |
| Speaker Ring | Determines if an incoming call will ring to the speaker, the handset, or both. | + **FLEX10** + 1 (Speaker) + **[HOLD/SAVE]** | VALUES – 1 = Speaker (S) 2 = Headset (H) 3 = Both (B) |
| Speakerphone | If this value is set to ON, Speakerphone can be used. | + FLEX11 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| VMIB Slot | Up to 3 VMIB cards could be installed in main system (ipLDK-300/300E). This ADMIN program can assign the VMIB card by entering sequential value 0 to 2 according to their VMIB slot order. | + FLEX12 + 0 (VMIB order to use) + **[HOLD/SAVE]** | VALUES – Not used at ipLDK-20 0 – 1 (ipLDK-100) 0 – 2 (ipLDK-300/300E) |
| ICM Group (Intercom Tenancy Group) | This feature selects the intercom Tenancy Group (01 – 15), this station belongs to. | + **FLEX13** + **02** (Group Number) + **[HOLD/SAVE]** | VALUES – 01 – 05 (ipLDK-20/100) 01 – 15 (ipLDK-300/300E) |
| Error Tone for Telephone Answering Device (TAD) | If this value is set to ON, and TAD is used on the SLT port, when the caller hangs up, a busy tone will be provided to TAD instead of an error tone. | + FLEX14 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| SLT Flash Drop | 0 : Disable - Flash detected, but Line Drop is disable. (Default) (already existing feature) 1 : Flash Drop - Flash detected and Line Drop is disconnected. (already existing feature) 2 : Flash Ignore - Ignore Hook Flash in any cases. The line is disconnected only if user goes ON-Hook. 3 : Hold Release - Drop the holding line if system detects Flash and then On-Hook. | + FLEX15 + 0 (DISABLE) + **[HOLD/SAVE]** | VALUES – 0 = Disable 1 = Flash Drop 2 = Flash Ignore 3 = Hold Release |
| Loop LCR Account Code | If this value is set to ON, the Station User must enter an Account Code to use Loop LCR. | + FLEX16 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| VMIB Message Type | FIFO/LIFO plays the first recorded VMIB message, or the latest message, respectively. | + FLEX17 + 1 (FIFO) + **[HOLD/SAVE]** | VALUES – 0 = LIFO 1 = FIFO |
| Off-net Call Forward | If this value is set to ON, off-net call forward can be used. | + FLEX18 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Forced Hands Free | If this value is set to ON, the station can force the called party station to use the hands-free mode when it is ringing. | + FLEX19 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| CID SLT CAS Gain (Not available in ipLDK-20) | This feature adjusts the gain of CID CAS data given to SLT. | + FLEX20 + VALUE + **[HOLD/SAVE]** | VALUES – 00 - 20 |

| PGM 111 | Description | Procedure | COMMENTS |
|---|---|---|---|
| CID SLT FSK Gain<br>(Not available in ipLDK-20) | This program sets FSK gain for CID SLT. | + FLEX21 + VALUE+ **[HOLD/SAVE]** | VALUES –<br>00 - 20 |
| Caller Voice Over<br>(Not available in ipLDK-20) | If this value is set to ON, the station can make Voice-Over to busy station. | + FLEX22 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| SIP User ID Table Index | User ID table index for SIP outgoing call's caller ID information.<br>If 00, then ipLDK system makes caller ID based on station number.<br>If 01~32, then programmed ID in user ID table (PGM 501) is used. | + FLEX23 + VALUE + **[HOLD/SAVE]** | VALUES –<br>00-32 (ipLDK-20)<br>00-64 (ipLDK -100)<br>00-96 (ipLDK - 300/300E) |
| Listen Redial DTMF | If this value is set to ON, DTMF tone is heard to the station user while redial. | + FLEX24 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

## 3.1.3 STATION ATTRIBUTES II (PGM 112)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **112.**
3. Enter the appropriate *Station Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 112 | Description | Procedure | COMMENTS |
|---|---|---|---|
| CO Warning Tone | Used to restrict outgoing call time. If this value is set to ON, the station user will receive a warning tone during a CO call after the timer expires. | + FLEX1 + **1** (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON<br><br>ADMIN 180-FLEX 22 |
| Automatic Hold | While seizing a CO line, the Station User secures another CO line by pressing the {CO} button. If this value is set to ON, the previous seized CO line will automatically be placed on Hold. | + FLEX2 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>Default = ON (for Attendant Station)<br>0 = OFF<br>1 = ON |
| CO Call Time Restriction | If this flag is set to ON, an outgoing CO call may be disconnected when CO call restriction timer expires. | + FLEX3 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON<br><br>PGM 180-FLEX 17 |
| Individual CO Line Access | If this value is set to ON, the Station User can access an individual CO line by dialing the individual CO access code | + FLEX4 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON<br><br>ADMIN 107-FLEX 8 |
| CO Line Queuing | When a user of station receives a busy signal during an attempt to access a CO line, the user may request a call back (queued call) when the CO Line is available. If this value is set to ON, the Station User will receive a call back from the CO Line when one is available. | + FLEX5 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| CO PGM | If this value is set to ON, the Station User can program a CO button to one of the available Flexible button. | + FLEX6 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Priority Line Answer (PLA) | If this value is set to ON, the station user can answer calls according to designated priority. | + FLEX7 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON<br>ADMIN 173 |

| PGM 112 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Prepaid Call | If this value is set to ON, the Station User can use the Prepaid Call feature. | + FLEX8 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF /1 = ON |
| Speed Dial Access | If this value is set to ON, the station user can use system speed dial call. | + FLEX9 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF / 1 = ON |
| Two-way Record | If this value is set to ON, the station user can record the incoming and outgoing voice during a conversation. | + FLEX10 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Fax Mode | If this value is set to ON, a single ring is provided and Attendant recall is not operated. | + FLEX11 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Off-net Call Mode | If this value is set to EXT, the station user can only forward CO calls to off-net (ex., mobile phone). Otherwise both CO and ICM calls can be forwarded to Off-net. | + FLEX12 + 1 (EXT) + **[HOLD/SAVE]** | VALUES -<br>1 = External Off-net Call Fwd is only allowed (EXT)<br>0 = Internal and External Off-net Call Fwd are allowed (ALL) |
| UCD Group Service | This feature is used when a station receives a DID/DISA call.<br>If this value is set to ON, the UCD Group the station belongs to will receive the incoming call. If this value is set to OFF, the station receives the incoming call directly whether the station is busy or not. | + FLEX13 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Ring Group Service | This feature is used when a station in a Ring Group receives a DID/DISA call.<br>If this value is set to ON, the Ring Group the station belongs to will receive the incoming call. If this value is set to OFF, the station receives the incoming call directly. | + FLEX14 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Stop Camp-on Tone | If this value is set to ON, Camp on Tone is not heard. | + FLEX15 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF / 1 = ON |
| Line Length | This feature is used to distinguish the line length when the distance between the stations and the station boards is too variable (SAF only). | + FLEX16 + 1 (LONG) + **[HOLD/SAVE]** | VALUES –<br>0 = Short<br>1 = Long<br>2 = Far |
| MSG Scroll Speed<br>*(Korea Only)* | The scroll speed of SMS or broadcasting notice message. | + FLEX17 + 0 (FAST) + **[HOLD/SAVE]** | VALUES –<br>0 = Fastest<br>1-6 = Slower by number<br>7 = Slowest |
| Block Back Call | If this value is set to ON, SLT recalling is blocked after pressing the [FLASH] button. | + FLEX18 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| I-TIME RST (Incoming CO call time Restriction) | If this value is set to ON, the conversation time of an incoming CO call is limited. After CO Call Restriction Timer is expired, the call is forced to disconnect. | + FLEX19 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Forced Station Account Code | If this value is set to ON, a password is needed to access an outgoing CO line. | + FLEX20 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF / 1 = ON |
| CID Type 2 Service<br>*(Not in ipLDK-20)* | If this value is set to ON, a busy station can receive additional CID information from an analog PSTN line. | + FLEX21 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Door Open | If this value is set to ON, the programmed Station can open a designated door by dialing the assigned Door Open Code. | + FLEX22 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Dummy Station | If this value is set to ON, a designated Station can be used as a dummy station, so a hot-desk agent can login at that location. | + FLEX23 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Emergency Supervisor | If this value is set to ON, this station can make emergency intrusion to other station. | + FLEX24 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

## 3.1.4 STATION ATTRIBUTES III (PGM 113)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **113.**
3. Enter the appropriate *Station Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 113 | Description | Procedure | COMMENTS |
|---|---|---|---|
| ADMIN<br>*(DKTU Only)* | If this value is set to ON, the assigned Station Users can program the ADMIN Database. | + FLEX1 + **1** (ON) + **[HOLD/SAVE]** | VALUES –<br>Default = ON (for Attendant Station)<br>0 = OFF / 1 = ON |
| VMIB Access | If this value is set to ON, the Station User can use VMIB. | + FLEX2 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF / 1 = ON |
| Group Listening | If this value is set to ON, the Station User can use group listening, while on a handset call by pressing the [MON] button; other people in the vicinity will be able to hear the conversation through the speaker.<br>**NOTE:** Only the voice of the User on the handset will project their voice to the User on the other end of the call. | + FLEX3 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Override Privilege | If this value is set to ON, the station user can override a CO Call. | + FLEX4 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF / 1 = ON |
| SMDR Hidden Dialed Digits | If this value is set to ON, the dialed number of a CO Call will on appear on the SMDR record | + FLEX5 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF, 1 = ON |
| Voice Over | If this value is set to ON, the busy Station can talk alternately between two calling or called parties. | + FLEX6 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Warm Line | If this value is set to HOT, the Station User can use Hot Line. Otherwise in the Warm Line state, the Warm Line Timer will start when the user lifts the handset or presses the [MON] button. | + FLEX7 + 1 (HOT) + **[HOLD/SAVE]** | VALUES –<br>0 = WARM<br>1 = HOT<br>ADMIN 122 |
| VMIB MSG Retrieve Password | If this value is set to ON, the Station User must enter a password to retrieve VMIB Messages. | + FLEX8 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| VMIB MSG Retrieve Date/Time | If this value is set to ON, Date and time will be heard when VMIB Messages are retrieved. | + FLEX9 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Alarm Attribute | If this value is set to ON, the Station will be able to receive alarm signals. | + FLEX10 + FLEX01 + 0 (OFF) + **[HOLD/SAVE]**<br>+ FLEX10 + FLEX02 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Mute Ring Service | If this value is set to ON, the station can get mute ring. | + FLEX11 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF / 1 = ON |
| Call Cut Off timer | Outgoing CO call time is restricted with this timer. Call is released automatically after this time. If it is 0, call is not released automatically. | + FLEX12 + 0 (VALUE) + **[HOLD/SAVE]** | VALUES –<br>0~99 (MINUTES) |
| Barge In Mode | If monitor mode, barge in station can hear current conversation only.<br>If speech mode, barge in station can converse together. | + FLEX13 + 0 (VALUE) + **[HOLD/SAVE]** | VALUES –<br>0-Disable<br>1-Monitor Mode<br>2-Speech Mode |
| Auto Forward to VMIB | When this value is set, call is answered by VMIB when FWD to VMIB timer is expired. | + FLEX14 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF / 1 = ON |
| Station Port Block | If this value is set to ON, Station is blocked so it's impossible to use that station. | + FLEX15 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF / 1 = ON |
| P-MSG DND | If this value is set to ON, then when Pre-selected Message feature is set at this station, CO and ICM ring is treated just like DND feature | + FLEX15 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

## 3.1.5 ISDN STATION ATTRIBUTE (PGM 114)

In this program mode, the following items can be customized:

5. Press the **[TRANS/PGM]** button.
6. Dial **114.**
7. Enter the appropriate *Station Range.*
8. Follow the specific Procedure as listed in the Table.

| PGM 114 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Calling Line identification Presentation (CLIP) LCD Display | If this value is set to ON, the CLI is displayed on the station's LCD. | + **FLEX1** + **0** (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Connected Line identification Presentation (COLP) LCD Display | If this value is set to ON, the connected party CLI is displayed on the Station LCD. | + **FLEX2** + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| CLI / Redirect | If this value is set to RED, the forwarding station no is sent . Otherwise, the original CLI is sent when using networking forward feature. | + **FLEX3** + 1 (RED) + **[HOLD/SAVE]** | VALUES – 0 = CLI 1 = RED |
| CLI MSG Wait | If this value is set to ON, the Station can receive CLI messages from an incoming CO call, when the Station doesn't answer. | + **FLEX4** + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| EXT or CO ATD | If this value is set to ATD, CO ATD code is used for outgoing CLI information. Otherwise, the Station number is used as CLI information | + **FLEX5** + 1 (ATD) + **[HOLD/SAVE]** | VALUES – 0 = EXT 1 = ATD(ADMIN 200) |
| Keypad Facility | If this value is set to KEYPAD, ISDN Station sends digits in the Keypad Facility after a call is connected. Otherwise DTMF is used. | + **FLEX6** + **1** (KEYPAD) + **[HOLD/SAVE]** | VALUES – 0 = DTMF 1 = KEYPAD |
| Long/Short | If this value is set to LONG, the ISDN Station acts in LONG passive mode. | + **FLEX7** + 1 (LONG) + **[HOLD/SAVE]** | VALUES – 0 = SHORT 1 = LONG |
| CPN Type | Designates the Called Party Number (CPN) type. If this value is set to 0, all SO stations of the S port will be ringing. | + **FLEX8** + **1** (Send Station number as CPN) + **[HOLD/SAVE]** | VALUES – 0 = Do not send CPN to S0. 1 = Send Station number as CPN 2 = Bypass CPN from the Network. |
| S0 Sub Address | Indicates how the sub-address is used in the SETUP message. If this value is set to 0, the Station sub-address not used. If set to 1, sub-address is filled in the CPN field of the SETUP message. Otherwise, the sub-address is filled in the CPSN (Called Party Sub-address Number) field of the SETUP message. | + **FLEX9** + **1** (IN CPN field of SETUP)+ **[HOLD/SAVE]** | VALUES – 0 = Station sub-address not used. 1 = Station sub-address IN CPN 2 = Station sub-address IN CPSN |
| DISA Restriction | If this value is set to ON, the station is restricted to receive the DISA incoming call. | + **FLEX10** + 1 (ON)+ **[HOLD/SAVE]** | VALUES – 0 = OFF / 1 = ON |
| CLI Name Display | If this field is ON, the system checks whether the received CLI matches with the speed dial data. If it matches, the speed dial name is displayed. | + **FLEX11** + 1 (ON)+ **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| ISDN CLI STA | Used as outgoing CLI when outgoing CLI is active and CLI type is EXT (Station). | + **FLEX12** + 1 (ON)+ **[HOLD/SAVE]** | VALUES – Default = Logical Station Number |
| Progress Indication | If this value is set to ON, the Progress Indicator shows non-ISDN devices. | + **FLEX13** + 1 (ON)+ **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| ISDN CLI Restriction (CLIR) | If this value is set to ON, the CLI information is restricted by PX. | + **FLEX14** + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| ISDN COLR | If this value is set to ON, the connected party's CLI information is restricted by the PX. | + **FLEX15** + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |

| PGM 114 | Description | Procedure | COMMENTS |
|---|---|---|---|
| DID Restriction | If this value is set to ON, the station is restricted from receiving DID incoming calls. | + **FLEX16** + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| DID Call Wait | If this value is set to ON, another DID call could be received at the busy Station. | + **FLEX17** + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| CLI Type | Designates CLI type: Station CLI Long (Max. 12), or Short for a Station with a normal CLI (Max. 4). | + **FLEX18** + 1 (LONG) + **[HOLD/SAVE]** | VALUES –<br>0 = Short<br>1 = Long |
| Long Station CLI | If outgoing CLI is activated and CLI type is EXT (Station), this value is used as the outgoing CLI. | + **FLEX19** + **VALUE** (max. 12 digits, Range=0-9) + **[HOLD/SAVE]** | |
| MSN Wait | If this value is set to ON, a busy station can receive a call waiting signal when another MSN call is received. | + FLEX20 + 1 (ON) + [HOLD/SAVE] | VALUES –<br>0 = OFF<br>1 = ON |
| Long CLI1 | If CLI type of outgoing CO line is set to 1, Long CLI 1 is sent. | + **FLEX21**+ **VALUE** (max. 16 digits, Range=0-9) + **[HOLD/SAVE]** | |
| Long CLI2 | If CLI type of outgoing CO line is set to 2, Long CLI 2 is sent. | + **FLEX22** + **VALUE** (max. 16 digits, Range=0-9) + **[HOLD/SAVE]** | |

## 3.1.6 FLEX BUTTON ASSIGNMENT (PGM 115)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **115.**
3. Enter the appropriate *Station Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 115 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Flex Button Assignment | Each Flexible Button in a station can be assigned as desired (refer to Table). | + **1** + **FLEX1** + **03** (TYPE No., Range=01-11) + **02** (Group Number) +**[HOLD/SAVE]** | VALUE –<br>1 = F01-F24<br>2 = F25-F48 |

**Button Type for Flexible Button Assignment**

| No. | Type | RANGE | | | | REMARK |
|---|---|---|---|---|---|---|
| | | ipLDK-300E | ipLDK-300 | ipLDK-100 | ipLDK-20 | |
| 1 | User Key | - | | | | User can program by button programming procedure. (empty) |
| 2 | {CO xx} Button | 001 – 400 | 001 – 200 | 01 – 40 | 01 – 16 | CO Line |
| 3 | {CO Grp xx} | 01 – 72 | 01 – 72 | 01 – 24 | 01 – 08 | CO Line Group |
| 4 | {LOOP} | | | | | |
| 5 | {STAxxxx} | 1000 – 1599 | 100 – 399 | 100 – 227 | 10 – 37 | Station No. |
| 6 | STA PGM Button | 11 – 99 | 11 – 99 | 11 – 99 | 11 – 99 | |
| 7 | {STA SPDxx} | 00 – 99 | 00 – 99 | 00 – 99 | 00 – 99 | Station Speed Bin |
| 8 | {SYS SPDxxxx} | 2000 –6999 | 2000 –4999 | 2000 –3499 | 2000 –2499 | System Speed Bin |
| 9 | FLEX NUM | Num Plan Code | | | | Numbering Plan Code of ADMIN 106 & 107 |
| 10 | Net DSS Button | | | | | When using Networking feature |
| 11 | MSN Button | MSN No. | | | | MSN Number |

**Initial Button Configuration**

| FLEX | 12-Button (Digital) | 24-Button (Digital) |
|---|---|---|
| 1 | {CO 1} | {CO 1} |
| 2 | {CO 2} | {CO 2} |
| 3 | {CO 3} | {CO 3} |
| 4 | {CO 4} | {CO 4} |
| 5 | {CO 5} | {CO 5} |
| 6 | {CO 6} | {CO 6} |
| 7 | {CO 7} | {CO 7} |
| 8 | {CO 8} | {CO 8} |
| 9 | {CO 9} | {CO 9} |
| 10 | {CO 10} | {CO 10} |
| 11 | {CO 11} | {CO 11} |
| 12 | {LOOP} | {LOOP} |
| 13 – 24 | - | Not assigned |

## 3.1.7 STATION COS (PGM 116)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **116.**
3. Enter the appropriate *Station Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 116 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Station COS | Each station is assigned a Class Of Service (COS) that determines the Station toll restriction for day and night operation (refer to Table). On a particular call, the CO COS is combined with Station COS to determine the restriction. COS for all stations at day and night operation are 1 as default. The weekend COS is the same as night COS. | + **FLEX1** (DAY) + **2** (COS, Range=1-11) +**[HOLD/SAVE]**<br><br>+ **FLEX2** (NIGHT) + **2** (COS, Range=1-11) +**[HOLD/SAVE]** | VALUE –<br>FLEX1 = DAY<br>FLEX2 = NIGHT |

**Station COS Table**

| Station COS | Remark |
|---|---|
| 1 | No restrictions are placed at the station for dialing. |
| 2 | The assignments in the Exception Table A are monitored for Allow and Deny numbers. |
| 3 | The assignments in the Exception Table B are monitored for Allow and Deny numbers. |
| 4 | The assignments in both Exception Tables A & B are monitored for Allow and Deny numbers. |
| 5 | The leading digit dialed can not be a long distance code. The dialed digits can be longer than 7 digits. There is no restriction for the number in Canned Toll Table. |
| 6 | The leading digits can not be a Long Distance code. Only eight digits maximum can be dialed. There is no restriction for the number in the Canned Toll Table. |
| 7 | Intercom and paging calls are allowed. No dialing allowed on CO lines. ICM boxes are assigned with this COS. |
| 8 | The assignments in the Exception Table C are monitored for allow and deny numbers |
| 9 | The assignments in the Exception Table D are monitored for allow and deny numbers |
| 10 | The assignments in the Exception Table C & D are monitored for allow and deny numbers |
| 11 | The assignments in the Exception Table A, B, C, & D are monitored for allow and deny numbers |

## 3.1.8 CO LINE GROUP ACCESS (PGM 117)

In this program mode, the following items can be customized:

5. Press the **[TRANS/PGM]** button.
6. Dial **117.**
7. Enter the appropriate *Station Range.*
8. Press *Flex* button at ipLDK-300/300E.
9. Follow the specific Procedure as listed in the Table.

| PGM 117 | Description | Procedure | COMMENTS |
|---|---|---|---|
| CO Line Group | Each station has accessibility to the CO Line Group which could be changed by Admin Programming. Accessibility is default for all Stations, and is available for multiple CO Line Groups. | **VALUE1 + VALUE2** (Range= FLEX01 – FLEX24, Toggle) + **[HOLD/SAVE]** | VALUE1 – Flex1=Check 01–24 Flex2=Check 25–48 Flex3=Check 49–72 *(IPLDK-300/300E Only)* VALUE2 – FLEX01=ON, access CO Group 1 |

## 3.1.9 PAGE ZONES (PGM 118 – 119)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial *PGM Number* (118 or 119).
3. Enter the appropriate *Station Range.*
4. Press *Flex* button at ipLDK-300/300E.
5. Follow the specific Procedure as listed in the Table.

| PGM | Description | Procedure | COMMENTS |
|---|---|---|---|
| PGM 118–Internal Page Zone | Each station can be assigned to internal page zone. All stations are assigned to Internal Page Zone 1 by default. | VALUE1 + VALUE2 (toggle) + **[HOLD/SAVE]** | VALUE1 – ipLDK-300/300E FLEX1=Zone01 – 24 FLEX2=Zone25 – 30 ipLDK-100 FLEX1=Zone01 – 10 ipLDK-20 FLEX1=Zone01 – 05<br><br>VALUE2 – FLEX01=ON, access Zone 1 |
| PGM 119–Conference Page Zone | Each station can be assigned to five different conference page zones 06 – 10. All stations are assigned to None by default. | + FLEX1-FLEX5 (toggle) + **[HOLD/SAVE]** | VALUES – DEFAULT = None ipLDK-300/300E Zone31 – 35 ipLDK-100 Zone11 – 15 ipLDK-20 Zone06-Zone10 |

## 3.1.10 ICM TENANCY GROUP (PGM 120)

Each Intercom Tenancy Group can be operated independently, and the Stations in the group can be assigned an individual CO Line Group to use. Each group can be assigned to an attendant and can be programmed to allow or deny calls to other groups. ipLDK-*20/100* supports 5 ICM Tenancy Groups (15 at ipLDK-300/300E) and Tenancy ATDs.

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **120.**
3. Enter the appropriate *Group Number (1-5).*
4. Follow the specific Procedure as listed in the Table.

| PGM 120 | Description | Procedure | COMMENTS |
|---|---|---|---|
| ICM Tenancy Group Attendant Assign | Each ICM group may have one attendant. Day / Night Mode for ICM Groups is set by the ICM Group Attendant. | + FLEX1 + ICM TENANCY GROUP ATD (Attendant)+ [HOLD/SAVE] | |
| ICM Tenancy Group Access | Each group can be programmed to allow or deny calls to other groups. | + FLEX2 + VALUE + [HOLD/SAVE] | VALUES –<br><br>ipLDK-20/100 FLEX1-FLEX5 (toggle for ICM TENANCY GROUP 1-5)<br><br>ipLDK-300/300E FLEX1–FLEX15 |

**ICM Tenancy Group Flex Buttons**

| FLEX | ITEM | RANGE | REMARK |
|---|---|---|---|
| 1 | Attendant | STA No. | Attendant station of assigned ICM tenancy group |
| 2 | Access Group | FLEX 1-5(20/100)<br>FLEX 01-15(LKD-300/300E) | ICM tenancy groups allow access to assigned groups |

## 3.1.11 ICM PRESET CALL FORWARD (PGM 121)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **121.**
3. Enter the appropriate *Station Number.*
4. Follow the specific Procedure as listed in the Table.

| PGM 121 | Description | Procedure | COMMENTS |
|---|---|---|---|
| ICM Preset Call Forward | If the station does not answer the incoming CO call within the Preset Call Forward timer, then the call is forwarded to a preset destination. No station is assigned as default. | Forward to Station: + **1** (Station) + *Station Number* + **[HOLD/SAVE]**<br>Forward to Hunt Group: + **2** (Hunt Group) + *Hunt Group Number* + **[HOLD/SAVE]** | VALUES –<br>Default = None<br>1 = Station<br>2 = Hunt Group |

## 3.1.12 IDLE LINE SELECTION (PGM 122)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **122.**
3. Enter the appropriate *Station Range*.
4. Follow the specific Procedure as listed in the Table.

| PGM 122 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Idle Line | Designates Hot Line or Warm Line. | + **1** (ITEM, refer to Table) + *RANGE* (1-4 digits, refer to table) + **[HOLD/SAVE]** | |

**Idle Line Selection Flex Buttons**

| DGT | ITEM | RANGE | REMARK |
|---|---|---|---|
| 1 | FLEX | 01 – 44 | To activate a feature on a flexible button as if pressed. |
| 2 | CO Line | 001 – 400 (ipLDK-300E)<br>001 – 200 (ipLDK-300)<br>01 – 40 (ipLDK-100)<br>01-16(ipLDK-20) | To secure a CO Line |
| 3 | CO Line Group | 01 – 72 (ipLDK-300/300E)<br>01 – 24 (ipLDK-100)<br>01-08 (ipLDK-20) | To secure a CO Line Group |
| 4 | Station | 1000 – 1599 (ipLDK-300E)<br>100 – 399 (ipLDK-300)<br>100 – 227 (ipLDK-100)<br>10-37(ipLDK-20) | To call an another station |

## 3.1.13 CTI STATION ATTRIBUTE (PGM 123)

***(Not in ipLDK-20)***

In this program mode, the features/modes are set when the CTIU8/30 or CTI module is connected at a Station. (Refer to the ***TAPI-NT User Guide***):

1. Press the **[TRANS/PGM]** button.
2. Dial **123.**
3. Enter the appropriate *Station Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 123 | Description | Procedure | COMMENTS |
|---|---|---|---|
| CTI Station Mode | Determines the CTI station mode | + FLEX1 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 : Inactive,<br>1 : CTI Mode,<br>2 : At Mode |
| CTI Station's Baud Rate | Determines the baud rate of the CTI Station. | + FLEX2 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0: 1200,<br>1: 2400,<br>2: 4800 |

## 3.1.14 SMDR ACCOUNT GROUP (PGM 124)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **124.**
3. Enter the appropriate *Station Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 124 | Description | Procedure | COMMENTS |
|---|---|---|---|
| SMDR Account Group | Stations can be assigned as a member of a call account group on SMDR. A station belongs to only one group. | + VALUE + **[HOLD/SAVE]** | VALUES – 00 – 99 (ipLDK-300/300E) 00 – 23 (ipLDK-20/100) |

## 3.1.15 COPY DSS BUTTON (PGM 125)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **125.**
3. Enter the appropriate *Station Number.*
4. Follow the specific Procedure as listed in the Table.

| PGM 125 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Copy DSS Button | The assigned DSS button can be copied to another station or ICM group. | Copy DSS to Station: + **FLEX1** + *Station Number* + **[HOLD/SAVE]** | VALUES – DELETE = [CONF] Button |
| | | Copy DSS to ICM Group: + **FLEX2** + *ICM Group* (Range=1-5) + **[HOLD/SAVE]** | |

## 3.1.16 STATION IP LIST (PGM 126) (ipLDK-20)

In this program mode, an IP Address can be programmed for each station. This IP Address is used to service first CTI through LAN.

1. Press the **[TRANS/PGM]** button.
2. Dial **126.**
3. Enter Bin number for S*tation Number (01-48).*
4. Enter IP Address (12 Digits).

***NOTE—This PGM number is not supported on the ipLDK-100/300/300E system.***

## 3.1.17 DISPLAY STATION NUMBER BY COS or CO ACCESS GROUP (PGM 130 – 131)

In this program mode, the following items can be shown:

1. Press the **[TRANS/PGM]** button.
2. Dial *PGM Number (*130 or 131).
3. Follow the specific Procedure as listed in the Table.

| PGM | Description | Procedure | COMMENTS |
|---|---|---|---|
| Display Station Number by COS – PGM 130 | The LCD will show the Stations of a designated Class of Service (COS). | + VALUE1 (Day/Night) + VALUE2 (COS Range) | VALUE1 – FLEX1 = DAY FLEX2 = Night<br><br>VALUE2 – 01-11<br>NAVIGATION – Next page=Volume Up/Down Key |
| Display Station Number by CO Access Group – PGM 131 | Station Numbers that access certain CO Line Groups could be checked. The LCD shows stations that are assigned to access the selected CO Line Group. | + VALUE (CO Line Group) | VALUES – 00 – 73(ipLDK-300/300E) 00 – 25(ipLDK-100) 01-08(ipLDK-20)<br><br>NAVIGATION – Next page=Volume Up/Down Key |

# 3.2 CO Line (PGM 140-146)

CO Line features are covered in PGMs 140 to 144. When programming, LCD and LEDs indicate current programmed data and programming status. If the programmer enters data correctly, then LCD and LEDs show the entered data, and the data is stored in the temporary buffer area.

## 3.2.1 CO SERVICE TYPE (PGM 140)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **140.**
3. Enter the appropriate *CO Line Range.*
4. Press *FLEX 1* to set CO Line type.
5. Press *FLEX 2* to set Sub Attributes.
6. Follow the specific Procedure as listed in the Table.

| PGM 140 | Description | PROCEDURE | COMMENTS |
|---|---|---|---|
| Normal CO | Used for Analog Lines or DISA service. | + FLEX1 + 1 + **[HOLD/SAVE]** | |
| ANALOG DID | Used for Analog DID service. | + FLEX1 + 2 + **[HOLD/SAVE]** | Not in ipLDK-20 |
| ISDN DID / MSN | Used for ISDN or VOIP Lines. | + FLEX1 + 3 + **[HOLD/SAVE]** | |
| TIE | | + FLEX1 + 4 + **[HOLD/SAVE]** | Not in ipLDK-20 |
| DCO DID | Used for E1 Lines. | + FLEX1 + 5 + **[HOLD/SAVE]** | Not in ipLDK-20 |

**CO Type Table**

| CO TYPE | SUB ATTRIBUTES | Procedure | COMMENTS |
|---|---|---|---|
| Normal | DISA Service | + **FLEX2** + VALUE1(Ring Mode)<br>+ **FLEX1** + VALUE2 (ON/OFF) | VALUE1 –<br>Flex1 = Day<br>Flex2 = Night<br>Flex3 = Weekend<br>Flex4 = Lunch<br>Flex5 = On-Demand<br><br>VALUE2 –<br>1 = ON<br>0 = OFF |
| | DISA VMIB Announcement | + **FLEX2** + VALUE1(Ring Mode)<br>+ **FLEX2** + VALUE2(00 – 70) | VALUE1 –<br>Flex1 = Day<br>Flex2 = Night<br>Flex3 = Weekend<br>Flex4 = Lunch<br>Flex5 = On-Demand<br><br>VALUE2 –<br>VMIB Message Number<br>(00 = not assigned) |
| Analog DID *(Not in ipLDK-20)* | Signal Type | + **FLEX2** + **FLEX1** + VALUE | VALUE –<br>1 = Immediate Start<br>2 = Wink Start<br>3 = Delayed Dial Start |
| | Info Number | + **FLEX2** + **FLEX2** + VALUE | VALUE –<br>00 – 70 (00 = not assigned) |
| TIE *(Not in ipLDK-20)* | TIE Type | + **FLEX2** + VALUE | VALUE –<br>1 = RD(Korea Only)<br>2 = LD(India)<br>3 = EM-C<br>4 = EM-D<br>5 = EM-I |

## 3.2.2 CO LINE ATTRIBUTES I (PGM 141)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **141.**
3. Enter the appropriate *CO Line Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM141 | Description | Procedure | COMMENTS |
|---|---|---|---|
| CO line Group | Each CO Line must be a member of a CO Line Group; Groups may be assigned according to the CO type and Class-Of-Service. | + **FLEX1** + **02** (CO Line Group) + **[HOLD/SAVE]** | VALUES –<br>00-73 (ipLDK-300/300E)<br>00-25 (ipLDK-100)<br>00-09 (ipLDK-20)<br>Group 00 = private group<br>Group 73 = not used<br>(25 at ipLDK-100<br>09 at ipLDK-20) |
| CO COS | COS is assigned to each CO line. | + FLEX2 + **02** (COS) + **[HOLD/SAVE]** | VALUES –<br>1 = No restriction<br>2 = Exception Table A governs<br>3 = Exception Table B governs<br>4 = Restricts Long Distance Code<br>5 = overrides Station COS 2,3,4 and 5, 6 |
| DISA Account Code | If this value is set to ON, when the incoming CO caller tries to access another CO Line by dialing a CO Line access code, the caller will be prompted to enter an authorization code. This is applied only when this CO Service type is DISA. | + FLEX3 + **01** (ON) + **[HOLD/SAVE]** | VALUE –<br>0 = OFF<br>1 = ON |
| CO Line Assign | If this value is set to ON, Polarity Reverse is applied to the CO Line, otherwise, Loop Start is applied. | + FLEX4 + **01** (Pol) + **[HOLD/SAVE]** | VALUE –<br>0 = Loop Start (Loop)<br>1 = Polarity Reverse (Pol) |
| CO Line Type | Designates the CO Line type. | + FLEX5 + **01** (PBX) + **[HOLD/SAVE]** | VALUE –<br>0 = CO<br>1 = PBX |
| CO Line Signal Type | Designates the CO Line signaling type. | + FLEX6 + **0** (Pulse) + **[HOLD/SAVE]** | VALUE –<br>0 = PULSE<br>1 = DTMF |
| Flash Type Analog CO Lines only. | Designates the type of Flash that is used. | + **FLEX7** + **1** (GROUND) + **[HOLD/SAVE]** | VALUE –<br>0 = LOOP<br>1 = GROUND |
| UNA (Universal Answer) | If this feature is set to ON, Universal Answer service is applied to this CO Line. | + FLEX8 + 1 (ON) + **[HOLD/SAVE]** | VALUE –<br>0 = OFF<br>1 = ON |
| CO Line Group Account | If this value is set to ON, the CO Line user will be prompted to enter an authorization code to access this CO Line. | + FLEX9 + 1 (ON) + **[HOLD/SAVE]** | VALUE –<br>0 = OFF<br>1 = ON |
| Tenancy Group | Designates the ICM Tenancy group number a Station belongs to. If this value is set, separated Day/Night ring mode is applied to incoming CO Calls according to the ICM Tenancy group Attendant Day/Night ring mode. | + **FLEX10** + 0**1** (Tenancy Group) + **[HOLD/SAVE]** | VALUE –<br>00-15 (ipLDK-300/300E)<br>0-5 (ipLDK-100/20) |

## 3.2.3 CO LINE ATTRIBUTES II (PGM 142)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **142.**
3. Enter the appropriate *CO Line Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 142 | Description | Procedure | COMMENTS |
|---|---|---|---|
| CO Line Name Display | If this value is set to ON and the CO Line Name is assigned, the Name is displayed on the station LCD when the station receives an incoming CO call through the CO Line. | + FLEX1 + 1 (ON) + **[HOLD/SAVE]** | VALUE – 0 = OFF 1 = ON |
| CO Line Name Assign | Designates the name of the CO Line. | + **FLEX2** + *CO LINE NAME* (Max. 12 characters, refer to Keyset Map)+ **[HOLD/SAVE]** | |

**KeySET Map**

| | | |
|---|---|---|
| . – 13<br>Q – 11<br>Z – 12<br>1 – 10 | A – 21<br>B – 22<br>C – 23<br>2 – 20 | D – 31<br>E – 32<br>F – 33<br>3 – 30 |
| G – 41<br>H – 42<br>I – 43<br>4 – 40 | J – 51<br>K – 52<br>L – 53<br>5 – 50 | M – 61<br>N – 62<br>O – 63<br>6 – 60 |
| P – 71<br>Q – 72<br>R – 73<br>S – 74<br>7 – 70 | T – 81<br>U – 82<br>V – 83<br>8 – 80 | W– 91<br>X – 92<br>Y – 93<br>Z – 94<br>9 – 90 |
| ✳1–Blank<br>✳2 - :<br>✳3 - , | 0 – 00 | |

| PGM 142 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Metering Unit | Designates the unit used to detect pulses from the CO Line. There are 7 metering signal types (refer to VALUES). | + **FLEX3** + METERING SIGNAL TYPE + **[HOLD/SAVE]** | VALUES – 00 = None 01 = 50 Hz (Not in ipLDK-20) 02 =12 KHz (Not in ipLDK-20) 03 = 16 KHz (Not in ipLDK-20) 04 = Singular Polarity Reverse (SPR) 05 = Plural Polarity Reverse (PPR) 06 = No Polarity Reverse (NPR) |
| Line Drop using CPT (Call Progress Tone) | If this value is set to ON, CPT checks the incoming CO Line when answered and if CPT detects a dial tone, the System should drop the line for toll restriction. | + FLEX4 + 1 (ON) + **[HOLD/SAVE]** | VALUE – 0 = OFF 1 = ON |
| CO Distinct Ring | If this value is not set to 0, the designated ring tone is heard at the Station when it receives an incoming CO Call, so that the user can distinguish incoming CO Calls and ICM Calls with the different ring tones. | + FLEX5 + 1 + **[HOLD/SAVE]** | VALUE – 0-4<br><br>ADMIN 422 |

| PGM 142 | Description | Procedure | COMMENTS |
|---|---|---|---|
| CO Line MOH | Designates MOH on the CO Line (refer to VALUES). | + **FLEX6** + **02** (External Music) + **[HOLD/SAVE]** | VALUE – ipLDK-300/300E<br>0 = Not assigned<br>1 = Internal Music<br>2 = External Music<br>3 = External Music 2<br>4 = External Music 3<br>5 = VMIB MOH 1<br>6 = VMIB MOH 2<br>7 = VMIB MOH 3<br>8 – 12 = SLT MOH 1-5<br>13 = Hold Tone<br>ipLDK-100<br>0 = Not assigned<br>1 = Internal Music<br>2 = External Music<br>3 = External Music 2<br>4 = External Music 3<br>5 = VMIB MOH 1<br>6 = VMIB MOH 2<br>7 – 11 = SLT MOH 1-5<br>12 = Hold Tone<br>ipLDK-20<br>0 = Not assigned<br>1 = Internal Music<br>2 = External Music<br>3 = VMIB MOH<br>4 – 8 = SLT MOH 1-5<br>9 = Hold Tone |
| PABX CO Dial Tone | If this value is set to YES, PX or PABX provides the CO Dial Tone; otherwise, the ipLDK system provides it. | + FLEX7 + 0 (No) + **[HOLD/SAVE]** | VALUES –<br>0 = NO<br>1 = YES |
| PABX CO Ring Back Tone | If this value is set to YES, PX or PABX provides a CO Ring Back Tone; otherwise, the ipLDK system provides it. | + FLEX8 + 1 (Yes) + **[HOLD/SAVE]** | VALUES –<br>0 = NO (System)<br>1 = YES (PBX) |
| PABX CO Error Tone | If this value is set to YES, PX or PABX provides a CO Error Tone; otherwise, the ipLDK system provides it. | + FLEX9 + 1 (Yes) + **[HOLD/SAVE]** | VALUES – 0 = NO (System)<br>1 = YES (PBX) |
| PABX CO Busy Tone | If this value is set to YES, PX or PABX provides the CO Busy Tone; otherwise, the ipLDK system provides it. | + FLEX10 + 1 (Yes) + **[HOLD/SAVE]** | VALUES –<br>0 = NO (System)<br>1 = YES (PBX) |
| PABX CO Announce Tone | If this value is set to YES, PX or PABX provides the CO Announce Tone; otherwise, the ipLDK system provides it. | + FLEX11 + 1 (Yes) + **[HOLD/SAVE]** | VALUES –<br>Default = NO<br>0 = NO (System)<br>1 = YES (PBX) |
| CO Flash Timer | Designates the length of time limit for CO Flash. CO Flashing is available within this timer; otherwise, the CO Line is released. | + **FLEX12** + **010** (100msec, Range=000-300) + **[HOLD/SAVE]** | |
| Open Loop Detect Timer | Designates the time limit for CO Open Loop. | + **FLEX13** + **010** (100msec, Range=00-20) + **[HOLD/SAVE]** | |
| Line Length | Used to determine the line length when the CO Line length is too variable. (SAF only) | + FLEX14 + **1** (Long) + **[HOLD/SAVE]** | VALUES –<br>0 = SHORT<br>1 = LONG |
| DISA Answer Timer | System answers DISA call after this time. | + **FLEX15** + **VALUE** (1 digit, Range=1-9) + **[HOLD/SAVE]** | |

| PGM 142 | Description | Procedure | COMMENTS |
|---|---|---|---|
| DISA Delay Timer | After this timer, DTMF Receiver is attached after DISA line answered.(CIS only) | + **FLEX16** + **VALUE** (1 digit, Range=1-9) + **[HOLD/SAVE]** | CIS only |
| SMDR Print | If this value is set to ON, SMDR is printed. | + FLEX17 + VALUE (1 : ON) + **[HOLD/SAVE]** | VALUE –<br>0 = OFF<br>1 = ON |
| BUSY/ERROR CPT Detect | If this value is set ON, a CO call is dropped when a CPT is detected from the CO. This is applied to CO-to-CO call and normal incoming or outgoing call also.<br>To detect a tone from the CO line, a CPT detection board is required. | + FLEX18 + VALUE (1 : ON) + **[HOLD/SAVE]** | VALUE –<br>0 = OFF<br>1 = ON |
| LD Delay Count | After sending Long Distance Code automatically Pause Time will be added. (CIS Only) | + FLEX19 + VALUE (1 digit, range0~5) + **[HOLD/SAVE]** | VALUE<br>Added Pause Count |

## 3.2.4 ISDN CO LINE ATTRIBUTES (PGM 143)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **143.**
3. Enter the appropriate *CO Line Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 143 | Description | Procedure | COMMENT |
|---|---|---|---|
| COLP Table Index | This value is used to make CLI when ipLDK system received CO call through DID CO line. | + **FLEX1** + **00** (Range=00-50) + **[HOLD/SAVE]** | If this value is set to 50, the CLI of this CO Line refers to ADMIN114-FLEX5. Else if this value is set to 00 – 49, the CLI of this CO Line refers COLP Table (ADMIN201) |
| CLIP Table Index | This value is used to make CLI when ipLDK system makes outgoing CO call through DID CO line. | + **FLEX2** + **00** (Range=00-50) + **[HOLD/SAVE]** | If this value is set to 50, the CLI of this CO Line refers to ADMIN114-FLEX5. If this value is set to 00 – 49, the CLI of this CO Line refers to the COLP Table (ADMIN201) |
| Call Type | Used to set the call type of DID CO line CLI. | + **FLEX3** + **1** (International) + **[HOLD/SAVE]** | VALUES –<br>0 = Unknown<br>1 = International<br>2 = National<br>3 = Not used<br>4 = Subscriber |
| DID CONV Type | When CO Service Type is set to ISDN DID/MSN or DCO DID (ADMIN 140), this value is used to convert incoming digits of DID line. | + **FLEX4** + **1** (Conversion Type) + **[HOLD/SAVE]** | VALUES –<br>0 = Convert digits by DID Digit Mask (PGM146)<br>1 = Call to the valid extension.<br>2 = Convert digits by Flex DID Table (PGM231) |
| DID Remove Number | If this value is not 0, and the CO Line is a DID Line, the system will discard the incoming DID digits up to amount of this value (ex., if value is set to 02 and the outside caller dialed '01245,' then the first two digits are removed). | + **FLEX5** + **02** (Remove Number, Range=00-99) + **[HOLD/SAVE]** | |
| ISDN Enblock Send | If this value is set to ON, Enblock Sending Mode is applied to outgoing CO calls. | + FLEX6 + **1** (On) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF, Overlap Sending Mode<br>1 = ON, Enblock Sending Mode |

| PGM 143 | Description | Procedure | COMMENT |
|---|---|---|---|
| CLI Transit | If this value is set to ORI, the caller CLI will be sent for CLI; otherwise, the call forwarded station CLI is sent. | + FLEX7 + **1** (ORI) + **[HOLD/SAVE]** | VALUES – 0 = CFW, send CLI as the call forwarded station's CLI 1 = ORI, send CLI as the originate caller's CLI |
| Numbering Plan Id | This value is used for the Numbering Plan Id of ISDN calls and the calling party number (refer to VALUES). | + **FLEX8** + **FLEX1** (FLEX1=CALLING, FLEX2=CALLED) + **1** (ISDN/TELEPHONY) + **[HOLD/SAVE]** | VALUES – 0 = unknown 1 = ISDN / Telephony 2 = Not Used 3 = Data 4 = Telex 5 = Not Used 6 = National Standard 7 = Private |
| ISDN Call Deflection/ Rerouting | If this value is set, ISDN call deflection or rerouting service is available. | + **FLEX9** + **1** (CALL DEFLECTION) + **[HOLD/SAVE]** | VALUES – 0 = No Service 1 = Call Deflection 2 = Call Rerouting |
| ISDN 1Digit Remove | If this value is set to ON, the first digit is removed (Italy only). | + FLEX10 + **1** (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| ISDN Call Proc. Inband Message (Italy only) | If this value is set to ON, Inband info. For call proceeding is available. | + FLEX11 + **1** (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| CLI Type | If this value is set to 0, the CLI is Normal (refer PGM200/PGM114). If this value is set to 1 or 2, the CLI is Long CLI (Station Long CLI 1 or 2). | + FLEX12 + 0 (Normal) + **[HOLD/SAVE]** | VALUES – 0 = Normal 1 = Long CLI 1 2 = Long CLI 2 |
| ISDN Call Rerouting | Reserved | + FLEX13 + **1** (ON) + **[HOLD/SAVE** | VALUES – 0 = OFF 1 = ON |
| Screening Indicator | User can choice screening indicator service. | + **FLEX14** + **1** (Conversion Type) + **[HOLD/SAVE]** | 0 is User provide – No service. 1 is User provide – Pass 2. is User provide – Fail 3. is Network provide. |
| Double CLI Service | If this value is set to Transit, Transit point CLI is displayed in station LCD, If this value is set to Original, Original Caller CLI is displayed in station LCD. | + FLEX15 + **1** (ON) + **[HOLD/SAVE** | VALUES – 0 = OFF 1 = ON |
| Prefix Table Index | When a user dials the number, a system checks the prefix code by the table correspond to this index. | + FLEX16 + **1** (Prefix Table Index) + **[HOLD/SAVE** | VALUES – 0 = OFF 1 ~ 6 = Table Index |
| Deny Incoming Call | If this value is set to ON, the incoming call is disconnected | + FLEX17 + **1** (ON) + **[HOLD/SAVE** | VALUES – 0 = OFF 1 = ON |
| ICLID Table Usage | If this value is set to ON, ICLID service is available | + FLEX18 + **1** (ON) + **[HOLD/SAVE** | VALUES – 0 = OFF 1 = ON |

## 3.2.5 CO RING ASSIGNMENT (PGM 144)

When CO Service Type (ADMIN 140) is set to Normal, CO incoming calls are routed to the proper destination according to this assignment. The destination can be a Station, Hunt Group, or VMIB announcement. The Ring assignment is applied separately by Day/Night/Weekend/Lunch/On-Demand Ring Mode by pressing FLEX 1-5.

**Ring Assignment to Station**

| FLEX | ITEM | DEST TYPE | DEFAULT |
|---|---|---|---|
| 1 | Day | TYPE 1: Station Range + Delay<br>TYPE 2: Hunt Group<br>TYPE 3: Voice Message | Station 101 (Attendant Station) is assigned with delay 0. |
| 2 | Night | | |
| 3 | Weekend | | |
| 4 | Lunch | | |
| 5 | On-Demand | | |

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM**] button.
1. Dial **144.**
1. Enter the appropriate *CO Line Range.*
1. Follow the specific Procedure as listed in the Table.

| PGM 144 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Ring Assignment to Station | To assign a call to the station, the delay value must be entered. If a delay value is set, the call will begin to ring after the delay time has expired. To receive incoming calls instantly, delay value should be set to 0. To delete a programmed CO ring assignment, press the **[SPEED]** button instead of entering a delay value. | + **FLEX1** (Day) + **1** + STATION RANGE + **Value** (Delay Time, Range=0-9) + **[HOLD/SAVE]** | |
| Ring Assignment to Hunt Group | Used to assign ring to a Station during night mode | + **FLEX2** (Night) + **2** + HUNT GROUP (620 – 629) + **[HOLD/SAVE]** | |
| Ring Assignment to VMIB Announcement | Used to assign a ring to Station during weekend mode | + **FLEX3** (Weekend) + **3** + VOICE MESSAGE (00 – 70) + **[HOLD/SAVE]** | |
| Ring Assignment to Network Station | Used to assign ring to a Networking System Station during weekend mode | + **FLEX3** (Weekend) + 4 + Network Station Number + **[HOLD/SAVE]** | |

## 3.2.6 CO LINE ASSIGNMENT DISPLAY (PGM 145)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **145.**
3. Enter the appropriate *CO Line Range.*
4. Follow the specific Procedure as listed in the Table.

| PGM 145 | Description | Procedure | COMMENTS |
|---|---|---|---|
| CO Line Assignment Display | Used to check the ring assignment destination of a CO line for each Day/Night Ring Mode. If CO Calls are assigned to the Station during Day or Night Mode, the delay value can be viewed (ex., value 100(1) means station 100 will receive a ring with a delay value of 1. In Weekend, Lunch, On-demand mode, Delay value is only 0. ***NOTE****—When there are too many stations to see, you can scroll data using volume up/down key.* | + **FLEX1** + **[HOLD/SAVE]** | VALUES –<br>FLEX1 = Day<br>FLEX2 = Night<br>FLEX3 = Weekend<br>FLEX4 = Lunch<br>FLEX5 = On-Demand |

## 3.2.7 CO LINE ATTRIBUTES III (PGM 146)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
1. Dial **146.**
1. Enter the appropriate *CO Line Range.*
1. Follow the specific Procedure as listed in the Table.

| PGM 146 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Incoming prefix code Insertion | If this value is set to ON, prefix code will be attached in front of incoming CLI information | + FLEX1 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Outgoing prefix code Insertion | If this value is set to ON, prefix code will be attached in front of outgoing CLI information. | + FLEX2 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| ISDN Line Type | Used to set the ISDN CODEC Type. | + FLEX3 + **1** (μ-Law) + [**HOLD/SAVE]** | VALUES –<br>0 = A-Law 1 = μ-Law |
| Calling Sub-address | If this value is set to ON, calling party sub-address of the ISDN Station is attached when an ISDN Station makes an outgoing CO Call through this CO Line. | + FLEX4 + **1** (On) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| DID Digit Receive No. | This value is used to count received DID Digit numbers for routing incoming DID calls. | + FLEX5 + **2** (2-4 digits) + **[HOLD/SAVE]** | |
| DID Digit Mask | When DID Conversion Type (ADMIN 143 – FLEX4) is set to 0, The received DID digits are converted by this value (ex., '1234' is received when DID Digit Mask is set as '#8**,' the digit is converted as '834'). | + FLEX6 + VALUE (4 digits, Range=0-9)+ **[HOLD/SAVE]** | VALUES –<br>Default = #1**<br># = ignore received digit<br>* = bypass digit |
| Collect Call Blocking *(Brazil Only)* | If this feature is set to ON, incoming collect call is blocked.<br>RESERVED | + FLEX7 + VALUE + **[HOLD/SAVE]** | VALUE –<br>0 = Not Block<br>1 = With Indicator<br>2 = Without Indicator |
| Collect Call Answer Timer *(Brazil Only)* | This feature is used when collect call is blocked.<br>RESERVED | + FLEX8 + VALUE + **[HOLD/SAVE]** | VALUE –<br>001 – 250 (100ms 3 digits) |
| Collect Call Idle Timer *(Brazil Only)* | This feature is used when collect call is blocked.<br>RESERVED | + FLEX9 + VALUE + **[HOLD/SAVE]** | VALUE –<br>001 – 250 (100ms 3 digits) |

# 3.4 System Data (PGM 160 – 184)

## 3.4.1 SYSTEM ATTRIBUTES Ⅰ (PGM 160)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **160.**
3. Follow the specific Procedure as listed in the Table.

| PGM 160 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Attendant Call Queuing Ring Back Tone | If this value is set to RBT, ring back tone is provided to the Station when the Station calls a busy Attendant; otherwise, the hold tone or VMIB-MOH (ADMIN 171 – FLEX2) is provided. | + FLEX1 + 1 (RBT) + **[HOLD/SAVE]** | VALUES –<br>0 = MOH, the Station user will hear MOH, hold tone or VMIB-MOH from the System database.<br>1 = RBT; the Station user will hear ring back tone when calling a busy Attendant Station.<br><br>PGM 171-FLEX2 |
| CAMP RBT/MOH | MOH or Ring Back tone is heard during the camp-on state. | + FLEX2 + 1 (RBT) + **[HOLD/SAVE]** | VALUES –<br>0 = MOH<br>1 = RBT |
| CO Line Choice | When securing a CO Line in a CO line group, if value is set to LAST CHOICE, the last available CO Line will be seized; otherwise, CO lines are secured in line availability order. | + FLEX3 + **1** (Round Robin) + **[HOLD/SAVE]** | VALUES –<br>0 = AVAILABLE LINE ORDER<br>1 = LAST CHOICE |
| DISA Retry Counter | When the DISA user fails to connect with a Station or access a feature, the DISA user can retry other calls or features within the programmed retry counter. If the DISA user cannot make a connection within the designated counter, the call will be routed according to the DID/DISA destination (ADMIN 167). | + FLEX4 + **4** (Retry Counter) + **[HOLD/SAVE]** | VALUES –<br>0-9 |
| ICM Continuous Dial-Tone | Sets whether ICM dial tone is continuous. | + FLEX5 + **0** (Discontinuous) + **[HOLD/SAVE]** | VALUES –<br>0 = NON-CONTINUOUS<br>1 = CONTINUOUS |
| CO Dial-Tone Detect | When speed dial is activated, if this value is set to ON, the System will detect a dial tone using CPT instead of the pause timer. | + FLEX6 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| External Night Ring | If this value is set to ON, when an incoming CO call is received and UNA service is activated, the call will be sent to LBC1. | + FLEX7 + 0 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

# 3.3 Slot Base Program (PGM 155)

## 3.3.1 BOARD ATTRIBUTES (PGM 155)

***NOTE**—Not available in ipLDK-20*

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
1. Dial **155.**
1. Follow the specific Procedure as listed in the Table.

| PGM 155 | Description | Procedure | COMMENTS |
|---|---|---|---|
| R2 CRC Check | If this value is set to ENABLE, the R2 CRC is checked. | + Slot Number of R2 Board + FLEX1 + 1 (ENABLE) + **[HOLD/SAVE]** | VALUES –<br>0 = DISABLE<br>1 = ENABLE |
| Distance Coefficient Setting | When the switch for selection long loop on the board is set to 'Long,' the gain value is set according to the Distance Coefficient (applied to LCOB/SLIB/HYBRID). | + Slot Number of LCOB/SLIB/HYBRID + FLEX2 + 1 (3Km) + **[HOLD/SAVE]** | VALUES –<br>0 = 0 Km<br>1 = 3 Km<br>2 = 5 Km<br>3 = 7 Km |
| DCO IP Address | IP Address of E1IB | + Slot Number of DCOB + FLEX3 + IP address + **[HOLD/SAVE]** | RESERVED |
| DCO Gateway IP Address | Gateway IP Address of E1IB | + Slot Number of DCOB + FLEX4 + IP address + **[HOLD/SAVE]** | RESERVED |
| DCO Subnet Mask | Subnet Mask of E1IB | + Slot Number of DCOB + FLEX5 + Subnet mask+ **[HOLD/SAVE]** | RESERVED |
| DCO Server IP | Server IP Address of E1IB | + Slot Number of DCOB + FLEX6 + IP address + **[HOLD/SAVE]** | RESERVED |
| DCO Master Clock | Set this board as a Master party or Slave party. | + Slot Number of DCOB + FLEX6 + IP address + **[HOLD/SAVE]** | RESERVED |

| PGM 160 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Hold Preference | There are two types of Hold: System Hold and Exclusive Hold. If a call is held in System Hold, any station can retrieve the call; in exclusive hold, only the holding Station can retrieve the call. | + **FLEX8** + **0** (Exclusive) + **[HOLD/SAVE]** | VALUES –<br>0 = EXCLUSIVE<br>1 = SYSTEM |
| Multi-line Conference | If this value is set to ON, conference with multiple CO lines is available. | + FLEX9 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Print LCR Converted Digit | If this value is set to ON, LCR converted digits are displayed on the LCD with SMDR data; otherwise, the originally-dialed digits are shown. | + FLEX10 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Conference Warning Tone | If this value is set to ON, other members will hear a warning tone when a new member enters a conference. | + FLEX11 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Off-net Prompt Usage | If this value is set to ON, the off-net VMIB announcement (prompt) will be heard when a call is Off-net call forwarded; this only applies to calls transferred within the System. | + FLEX12 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Off-net DTMF Tone | If this value is set to ON, the DTMF dial tone will be heard to the outside caller when the call is Off-net call forwarded; this only applies to calls transferred within the System. | + FLEX13 + 0 (OFF) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Voice Path Connect | If this value is set to IMM (immediate), voice path is connected immediately for CO outgoing calls; otherwise, calls are connected after dialing digits. | + FLEX14 + 1 (IMM) + **[HOLD/SAVE]** | VALUES –<br>0 = DGT<br>1 = IMM |
| Transfer Tone | While a call is transferred to a destination Station, if this value is set to RBT, transferred Station will hear a ring back tone; otherwise, MOH will be heard. | + FLEX15 + 0 (RBT) + **[HOLD/SAVE]** | VALUES –<br>0 = RBT<br>1 = MOH |
| ACD Package Usage | If this value is set to ON, ACD Information is printable. | + FLEX17 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| CO – CO Unsupervised Conference Timer Extend | If this value is set to on, the conference call user can extend the Unsupervised Conference Timer by dialing the UC Timer Extend Code. | + FLEX18 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Call Log List Number | Sets the number of Call Log Lists per Station. | + FLEX19 + VALUE (2 digits, Range=15-50) + **[HOLD/SAVE]** | |
| Cut ISDN Overlap Dial Noise | Cut the noise of ISDN overlap dialing | + FLEX20 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

## 3.4.2 SYSTEM ATTRIBUTES II (PGM 161)

In this program mode, the following items can be customized:

4. Press the **[TRANS/PGM]** button.
5. Dial **161.**
6. Follow the specific Procedure as listed in the Table.

| PGM 161 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Network Time/Date Setting | If this value is set to ON, the system time/date is set by the network time/date. | + FLEX1 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF / 1 = ON |
| Off-Hook Ring Type | The off-hook ring type in the system can be set to mute or a one burst ring. | + FLEX2 + 0 (Burst) + [**HOLD/SAVE]** | VALUES – 0 =BURST /1 = MUTE |
| Override 1st CO Line Group | If this value is set to ON, when there is no available CO Line in the first CO Line Group, the System can access the next accessible CO Line Group. | + FLEX3 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Page Warning Tone | If this value is set to ON, a page warning tone will be heard when paging starts. | + FLEX4 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF / 1 = ON |
| Auto Privacy | If this value is set to ON, a call is protected from override regardless of Station Override Privilege. | + FLEX5 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF / 1 = ON ADMIN 113-FLEX 4 |
| Privacy Warning Tone | If this value is set to ON, a privacy warning tone will be heard when a call is overridden. | + FLEX6 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Single Ring for CO Call | If this value is set to YES, the ICM ring cadence and the CO ring cadence is reversed each other. The cadence of ICM ring is set to 1sec on/ 4sec off. The cadence of CO ring is set to 0.4s on/ 0.2s off/ 0.4s on/ 4sec off. | + FLEX7 + 1 (Yes) + **[HOLD/SAVE]** | VALUES – 0 =NO 1= YES |
| WTU Auto Release | If this value is set to ON, WTU is released automatically. | + FLEX8 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF / 1 = ON |
| ACD (Automatic Call Distribution) Print Enable | If this value is set to ON, ACD Printing is available. | + FLEX9 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF / 1 = ON |
| ACD Print Timer | ACD database can be printed per the desired time interval (10 sec or 1 hour base). | + **FLEX10** + **002** (3 digits, Range=001-225) + **[HOLD/SAVE]** | VALUES – ADMIN 161-FLEX 14 |
| ACD Clear Database after Print | If this value is set to ON, the ACD database is re-initialized after printing. | + FLEX11 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF / 1 = ON |
| VIMB Prompt Gain | Used to designate the VMIB Announcement (prompt gain). | + **FLEX12** + **002** (Range= 00-31) + **[HOLD/SAVE]** | |
| CLI Information at VM SMDI (Simplified Message Desk Interface) | If this value is set to ON, CLI is added when Voice Mail information is printed through RS232 port by SMDI. | + FLEX13 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| ACD Print Timer Unit | This value determines the unit of ACD Print timer. | + FLEX14 + 1 (Hour) + **[HOLD/SAVE]** | VALUES – 0 = 10 SEC /1 = HOUR RANGE – 1 hr-10sec ADMIN 161 – FLEX 10 |
| Set VM SMDI Type | This value sets VM SMDI type. | + **FLEX15** + **1** (Type II) + **[HOLD/SAVE]** | VALUES- 0 = TYPE I 1= TYPE II Refer to the RS232 Spec |
| Incoming Toll Check | If this value is set to ON, the System checks for tolls applied to incoming CO calls. | + FLEX16 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |

| PGM 161 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Auto FAX transfer CO | If Auto FAX CO line is programmed, the system answers and detects the FAX calling tone (1100Hz, 0.5sec ON/3sec OFF repeat tone) from an incoming analog CO line. The system will route this call to the last SLT port on basic MBU (extension 17, extension 15 in compact type KSU) when tone is detected within programmed time. | + **FLEX17** + *CO Line Number* (Range=01-08) + **[HOLD/SAVE]** | This is available for Analog CO line.<br>Not served at ipLDK-100/300/300E |
| NO DSS Indication | If this value is set to ENABLE, the LED indication of the {CO} or {DSS} button is blocked (ex., LED does not flash even if there is an incoming call to the assigned CO Line or Station). This feature does not apply for direct calls such as DID/DISA. | + **FLEX18** + **0** (Disable) + **[HOLD/SAVE]** | VALUES –<br>0 = DISABLE<br>1 = ENABLE |
| UK Billing Mode<br>*(UK Only)* | If this value is set to ON, the UK Billing Mode is applied. | + FLEX19 + 1 (On) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF 1 = ON |
| COS 7 When Authorization Fail | If this value is set to ON, the Station COS will temporarily be changed to 7 when an invalid authorization code is entered at the Station. COS can be recovered by activating COS RESTORE.<br>If not assigned, the day & night COS in PGM 116 will be changed to 7 when an invalid authorization code is entered at the Station. To recover COS, day & night COS should be reassigned. | + FLEX20 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| 5 Digits Authorization Code Usage | If this value is set to ON, Authorization code is programmed as 5 digits fixed length. Under this mode, 5 digits of the authorization code should be entered when related features are activated. If this value is set to OFF, Variable Authorization code (3-11 digits) is used. | + FLEX21 + Value + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| LCR Dial Tone Detect | If this value is set to ON, ipLDK system first checks if the CO provides dial tone in case if analog CO is seized for LCR dialing. If there's no dial tone, the call is rerouted to Alternate DMT Index.<br>If LCR type is set to M13, LCR dial tone detect option is not applied. | + FLEX22 + Value + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Transit-OUT Security | When system receive setup packet for Transit-Out feature from VOI CO line, system can check setup packet with registered IP whether if this packet is valid or not. If [TRANSIT-OUT SECURITY] admin is set, received IP in all of received setup packet for transit-out feature will be checked with registered IP, and if this IP is verified, transit-out feature will be operated. | + FLEX23 + Value + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

## 3.4.3 ADMIN PASSWORD (PGM 162)

In this program mode, the following items can be customized:

7. Press the **[TRANS/PGM]** button.
8. Dial **162.**
9. Follow the specific Procedure as listed in the Table.

| PGM 162 | Description | Procedure | COMMENTS |
|---|---|---|---|
| ADMIN Password | An ADMIN password can be assigned for entering ADMIN Programming mode, as a security measure. To delete the ADMIN password, press the **[SPEED]** button. | + *Password* (4 digits, Range=*, #, 0-9) + **[HOLD/SAVE]** | VALUES –<br>Default = Not Assigned<br># = ignore received digit<br>* = bypass the digit |

## 3.4.4 ALARM ATTRIBUTES (PGM 163)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **163.**
3. Follow the specific Procedure as listed in the Table.

| PGM 163 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Alarm Enable | If this value is set to ON, Alarm is available. | + FLEX1 + 1 (On) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Alarm Contact Type | | + FLEX2 + 0 (Open) + [**HOLD/SAVE]** | VALUES –<br>0 = OPEN<br>1 = CLOSE |
| Alarm Mode | | + FLEX3 + **0** (Door Bell) + **[HOLD/SAVE]** | VALUES –<br>0 = DOOR BELL<br>1 = ALARM |
| Alarm Signal Mode | If this value is set to REPEAT, the Alarm Signal is repeated until it is Alarm Reset. | + FLEX4 + 0 (Once) + [**HOLD/SAVE]** | VALUES –<br>0 = ONCE<br>1 = REPEAT |

## 3.4.5 ATTENDANT ASSIGNMENT (PGM 164)

A maximum of 5 Attendants can be assigned including the Main Attendant and System Attendant. In this program mode, the following items can be customized:

4. Press the **[TRANS/PGM]** button.
5. Dial **164.**
6. Follow the specific Procedure as listed in the Table.

| PGM 164 | Description | Procedure | COMMENTS |
|---|---|---|---|
| System Attendant Assignment | The System Attendant differs from the Main Attendant in regard to call handling and system management priority. The System Attendant has more priority over the Main Attendant(s).<br>**NOTE:** It is impossible to delete the first System Attendant. | + **FLEX1** + *Station Number* + **[HOLD/SAVE]** | VALUES –<br>Default = Station 101(System Attendant) |
| Main Attendants Assignment | Main Attendants generally serve as call handlers. From the 2nd to 5th Stations, are the Main Attendants.<br>**NOTE—**To delete a Main Attendant, press the FLEX button, and select the Attendant to delete; press the **[SPEED]** button. Use the Volume button to scroll and view all 5 Members when they aren't visible at one time. | + **FLEX2 (**Range: FLEX2-FLEX5**)** + *Station Number* + **[HOLD/SAVE]** | VALUES –<br>Default = Not Assigned<br><br>1-4(Number of Main Attendants) |

## 3.4.6 AUTO ATTENDANT VMIB ANNOUNCEMENT (PGM 165)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **165.**
3. Follow the specific Procedure as listed in the Table.

| PGM 165 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Auto Attendant Usage | If this value is set to ON, Auto Attendant is activated. | + FLEX1 + 1 (On) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| VMIB Announce | This value is the number of VMIB announcements played when Auto Attendant is activated. | + **FLEX2** + VMIB announcement (00-70) + **[HOLD/SAVE]** | |

## 3.4.7 CO-TO-CO COS (PGM 166)

When an external user of a DID/DISA/TIE line tries to access another CO Line in the system, CO-to-CO COS is applied. The attributes of CO-to-CO COS are the same as the Station COS.

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **166.**
3. Follow the specific Procedure as listed in the Table.

| PGM 166 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Day COS | Class-of-Service of Day Mode | + FLEX1 + 2 + **[HOLD/SAVE]** | VALUES – 1-11 |
| Night / Weekend COS | Class-of-Service of Night/Weekend Mode | + FLEX2 + 2 + **[HOLD/SAVE]** | VALUES – 1-11 |

## 3.4.8 DID/DISA DESTINATION (PGM 167)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **167.**
3. Follow the specific Procedure as listed in the Table.

| PGM 167 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Busy Destination | When there is a DID/DISA incoming call, if the caller dialed a busy destination, the call will be routed to the Busy Destination (Tone / Attendant / Hunt). | + FLEX1 + VALUE + **[HOLD/SAVE]** | VALUES – FLEX1 = Tone FLEX2 = Attendant (Ring Assign) FLEX3 = Forward to Hunt Group |
| Error Destination | When there is a DID/DISA incoming call, if the caller dialed an invalid number, the call will be routed to the Error Destination (Tone / Attendant / Hunt). | + FLEX2 + VALUE + **[HOLD/SAVE]** | VALUES – FLEX1 = Tone FLEX2 = Attendant (Ring Assign) FLEX3 = Forward to Hunt Group |
| No Answer Destination | When there is a DID/DISA incoming call, if the destination does not answer, the call will be routed to the No Answer Destination (Tone / Attendant / Hunt). | + FLEX3 + VALUE + **[HOLD/SAVE]** | VALUE – FLEX1 = Tone FLEX2 = Attendant (Ring Assign) FLEX3 = Forward to Hunt Group |
| DND Destination | When there is a DID/DISA incoming call and the destination is on DND state, then the call is routed to DND Destination (Tone / Attendant / Hunt). | + FLEX4 + VALUE + **[HOLD/SAVE]** | VALUE – FLEX1 = Tone FLEX2 = Attendant (Ring Assign) FLEX3 = Forward to Hunt Group |
| VMIB Prompt Usage | If the value is set to ON and VMIB is available, the proper VMIB announcement will be presented to the caller before the call is routed to each Destination. | + FLEX5 + VALUE + **[HOLD/SAVE]** | VALUE – FLEX1 = Busy Prompt Usage FLEX2 = Error Prompt Usage FLEX3 = DND Prompt Usage FLEX4 = No Answer Prompt Usage FLEX5 = Attendant Transfer Prompt Usage |
| Busy Prompt Usage | If the value is set to ON and VMIB is available, the Busy announcement will be presented to the caller before the call is routed to Busy Destination. | + **FLEX5** + FLEX1 + **VALUE** + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Error Prompt Usage | If the value is set to ON and VMIB is available, an Error announcement will be presented to the caller before the call is routed to the Error Destination. | + **FLEX5** + FLEX2 + **VALUE** + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| DND Prompt Usage | If the value is set to ON and VMIB is available, a DND announcement will be presented to the caller before the call is routed to the DND Destination or Reroute Busy Destination when the original destination is in DND mode | + **FLEX5** + FLEX3 + **VALUE** + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |

| PGM 167 | Description | Procedure | COMMENTS |
|---|---|---|---|
| No Answer Prompt Usage | If the value is set to ON and VMIB is available, the No Answer announcement will be presented to the caller before the call is routed to the No Answer Destination. | + **FLEX5** + FLEX4 + **VALUE** + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Attendant Transfer Prompt Usage | If the value is set to ON and VMIB is available, the Attendant Transfer announcement will be presented to the caller before the call is routed to the Attendant. | + **FLEX5** + FLEX5 + **VALUE** + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Reroute Busy Destination | When a DID/DISA call is rerouted by the no answer forward/CCR and if rerouted destination is busy, calls will follow the Reroute Busy Destination. *NOTE—Only Supported at ISDN CO Lines.* | + **FLEX6** + **FLEX1** + **VALUE** + **[HOLD/SAVE]** | VALUES – FLEX1 = Tone FLEX2 = Attendant (Ring Assign) FLEX3 = Forward to Hunt Group<br><br>PGM 167-Flexible button 5 |
| Reroute Error Destination | When a DID/DISA call is rerouted by the no answer forward/CCR state and if the rerouted destination returns an error, calls will follow the Reroute Error Destination. *NOTE—Only Supported at ISDN CO Lines.* | + FLEX7 + FLEX1 + VALUE + **[HOLD/SAVE]** | VALUES – FLEX1 = Tone FLEX2 = Attendant (Ring Assign) FLEX3 = Forward to Hunt Group<br><br>PGM 167-Flexible button 6 |
| Reroute No Answer Destination | If No Answer Destination is busy, the call will be rerouted to Reroute No Answer Destination (Tone / Attendant / Hunt). *NOTE—Only Supported at ISDN CO Lines.* | + FLEX8 + FLEX1 + VALUE + **[HOLD/SAVE]** | VALUES – FLEX1 = Tone FLEX2 = Attendant (Ring Assign) FLEX3 = Forward to Hunt Group<br><br>PGM 167-Flexible button7 |

## 3.4.9 EXTERNAL CONTROL CONTACT (PGM 168)

| FLEX | ITEM | VALUE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | First Contact | 1 – 5 | | 1 = LBC(STA #)<br>2 = Door<br>3 = Ext. 1<br>4 = Ext. 2(Not in ipLDK-20)<br>5 = Ext. 3(Not in ipLDK-20) |
| 2 | Second Contact | 1 – 5 | | |
| 3 | Third Contact | 1 – 5 | Not in ipLDK-20 | |
| 4 | Fourth Contact | 1 – 5 | Not in ipLDK-20 | |
| 5 | Fifth Contact | 1 – 5 | Not in ipLDK-20 | |
| 6 | Sixth Contact | 1 – 5 | Not in ipLDK-20 | |
| 7 | Seventh Contact | 1 – 5 | ipLDK-300/300E | |

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **168.**
3. Follow the specific Procedure as listed in the Table.

| PGM 168 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Loud Bell Control (LBC) | If an External Control Contact is assigned to LBC, it is activated. During night mode, LBC1 may be programmed to provide external night ringing. In this case LBC1 does not follow the associated Station ring. | + **FLEX1** (Range: FLEX1-FLEX4) + **1** + *Station Number* + **[HOLD/SAVE]** | VALUES –<br>1 = LBC (STA #)<br>2 = Door<br>3 = Ext. 1<br>4 = Ext. 2(Not in ipLDK-20)<br>5 = Ext. 3(Not in ipLDK-20) |
| Door Open | External Control Contact can be used when programmed to open a door. | + FLEX1 + 2 + **[HOLD/SAVE]** | VALUES –<br>1 = LBC (STA #)<br>2 = Door<br>3 = Ext. 1<br>4 = Ext. 2(Not in ipLDK-20)<br>5 = Ext. 3(Not in ipLDK-20) |
| External Relay | External Control Contact can be for External Relay. | + FLEX1 + 3 + **[HOLD/SAVE]** | VALUES –<br>1 = LBC (STA #)<br>2 = Door<br>3 = Ext. 1<br>4 = Ext. 2(Not in ipLDK-20)<br>5 = Ext. 3(Not in ipLDK-20) |

## 3.4.10 LCD TIME/DATE/LANGUAGE DISPLAY MODE (PGM 169)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **169.**
3. Follow the specific Procedure as listed in the Table.

| PGM 169 | Description | Procedure | COMMENTS |
|---|---|---|---|
| LCD Time Display Mode | Two LCD Time formats are available: Ordinary (12-hour), and Military (24-hour) mode | + FLEX1 + **0** (24H) + **[HOLD/SAVE]** | VALUES –<br>0 = 24-HOUR MODE<br>1 = 12-HOUR MODE |
| LCD Date Display Mode | Two LCD date formats are available: Day/Month/Year (DDMMYY), or Month/Day/Year (MMDDYY) mode. | + **FLEX2** + **1** (MMDDYY) + **[HOLD/SAVE]** | VALUES –<br>0 = DDMMYY<br>1 = MMDDYY |
| LCD Language Display Mode | A choice of 15 LCD language formats can be selected. | + **FLEX3** + **VALUE** (Range: 00-15) + **[HOLD/SAVE]** | VALUES –<br>00 = English<br>01 = Italian<br>02 = Finnish<br>03 = Dutch<br>04 = Swedish<br>05 = Danish<br>06 = Norwegian<br>07 = Hebrew<br>08 = Germany<br>09 = French<br>10 = Portuguese<br>11 = Spanish<br>12 = Korean<br>13 = Estonia<br>14 = Russian<br>15 = Turkish |

## 3.4.11 MODEM ASSIGNMENT (PGM 170)

Modem service is available only when a MODU is installed on the MBU. In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **170.**
3. Follow the specific Procedure as listed in the Table.

| PGM 170 | Description | Procedure | COMMENTS |
|---|---|---|---|
| STA No. | The Modem-associated station to be used as Modem line flexibly.<br>Incoming CO calls will be connected to Modem device if the Station receives a call. | + **FLEX1** + *Station Number* + **[HOLD/SAVE]** | VALUES –<br>Default = last station(147) |
| CO No. | If a CO Line is associated with the Modem, all incoming CO calls through the line will be connected via the Modem. The Modem-associated to the CO Line cannot be used for outgoing CO calls. | + FLEX2 + *CO Number* + [**HOLD/SAVE]** | VALUES –<br>01-36(Analog CO line) |

## 3.4.12 MUSIC ASSIGNMENT (PGM 171)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **171.**
3. Follow the specific Procedure as listed in the Table.

| PGM 171 | Description | Procedure | COMMENTS |
|---|---|---|---|
| BGM Type | | + FLEX1 + *BGM Type* (refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>ipLDK-20<br>0=Not Assignment<br>1 = Int. Music<br>2 = External Music<br>3 = VMIB MOH<br>4-8 = SLT MOH<br><br>ipLDK-100<br>00=Not Assignment<br>1 = Int. Music<br>02-04 = External Music<br>05-06 = VMIB MOH<br>07-11 = SLT MOH<br><br>ipLDK-300/300E<br>00=Not Assignment<br>1 = Int. Music<br>02-04 = External Music<br>05-07 = VMIB MOH<br>08-12 = SLT MOH |
| MOH Type | When MOH Type is assigned, the external party of a CO line call placed in the hold state (System, exclusive, transfer, conference, etc.), should hear music. | + FLEX2 + *MOH Type* (refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>ipLDK-20<br>0=Not Assignment<br>1 = Int. Music<br>2 = External Music<br>3 = VMIB MOH<br>4-8 = SLT MOH<br>9 = Hold Tone<br><br>ipLDK-100<br>00=Not Assignment<br>1 = Int. Music<br>02-04 = External Music<br>05-06 = VMIB MOH<br>07-11 = SLT MOH<br>12 = Hold Tone<br><br>ipLDK-300/300E<br>00=Not Assignment<br>1 = Int. Music<br>02-04 = External Music<br>05-07 = VMIB MOH<br>08-12 = SLT MOH<br>13 = Hold Tone |
| ICM Box Music Channel | | + FLEX3 + *Music Channel* (refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>ipLDK-20<br>0=Not Assignment<br>1 = Int. Music<br>2 = External Music<br>3 = VMIB MOH |

| PGM 171 | Description | Procedure | COMMENTS |
|---|---|---|---|
| | | | 4-8 = SLT MOH<br><br>ipLDK-100<br>00=Not Assignment<br>1 = Int. Music<br>02-04 = External Music<br>05-06 = VMIB MOH<br>07-11 = SLT MOH<br><br>ipLDK-300/300E<br>00=Not Assignment<br>1 = Int. Music<br>02-04 = External Music<br>05-07 = VMIB MOH<br>08-12 = SLT MOH |
| Assign SLT MOH | To assign a SLT MOH, set the value and match the SLT Station number for the SLT port. | + FLEX4 + FLEX1 (Range: FLEX1-5) + *SLT Station Number* + **[HOLD/SAVE]** | VALUES –<br>FLEX1 = SLT MOH 1<br>FLEX2 = SLT MOH 2<br>FLEX3 = SLT MOH 3<br>FLEX4 = SLT MOH 4<br>FLEX5 = SLT MOH 5 |
| Dial Tone Source | To assign an external dial tone, set the SLT Station number of the SLT port. | + FLEX5 + *SLT MOH* (Range=1-5, refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>1 = SLT MOH 1<br>2 = SLT MOH 2<br>3 = SLT MOH 3<br>4 = SLT MOH 4<br>5 = SLT MOH 5 |
| ICM Ring Back Tone | To assign an external ICM ring back tone, set the SLT Station number of the SLT port. | + FLEX6+ *SLT MOH* (Range=1-5, refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>1 = SLT MOH 1<br>2 = SLT MOH 2<br>3 = SLT MOH 3<br>4 = SLT MOH 4<br>5 = SLT MOH 5 |
| CO Ring Back Tone | To assign external DID ring back tone, set the SLT Station number of the SLT port. | + FLEX7 + SLT MOH (refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>1 = SLT MOH 1<br>2 = SLT MOH 2<br>3 = SLT MOH 3<br>4 = SLT MOH 4<br>5 = SLT MOH 5 |

## 3.4.13 PBX ACCESS CODE (PGM 172)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **172.**
3. Follow the specific Procedure as listed in the Table.

| PGM 172 | Description | Procedure | COMMENTS |
|---|---|---|---|
| PBX Access Code | A maximum 4 PABX Access Codes can be assigned. A PABX Access Code is a 1 or 2-digit number. | + FLEX1 (FLEX1-4) + **9** (1 or 2 digits, Range=*,#,1-99) + **[HOLD/SAVE]** | VALUES –<br>Default = Not Assigned |

## 3.4.14 PLA PRIORITY SETTING (PGM 173)

| FLEX | ITEM | VALUE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | XFER (Transfer Call) | 1 – 4 | 1 | PLA priority is set exclusively |
| 2 | REC (Recall) | 1 – 4 | 2 | |
| 3 | INC (Incoming Call) | 1 – 4 | 3 | |
| 4 | QUE (Queued Call) | 1 – 4 | 4 | |

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **173.**
3. Follow the specific Procedure as listed in the Table.

| PGM 173 | Description | Procedure | COMMENTS |
|---|---|---|---|
| PLA Priority Setting | PLA priority is set exclusively for call handling in relation to Transferred Calls, Recalled Calls, Incoming Calls, and Queued Calls. | Answer Priority: QUE → INC → REC → XFER<br>+ FLEX1 + 4 + FLEX2 + 3 + FLEX3 + 2 + FLEX4 + 1 + **[HOLD/SAVE]** | VALUES –<br>Default = 1<br>1 = XFER<br>2 = REC<br>3 = INC<br>4 = QUE |

## 3.4.15 RS-232C PORT SETTING (PGM 174)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **174.**
3. Follow the specific Procedure as listed in the Table.

| PGM 174 | Description | Procedure | COMMENTS |
|---|---|---|---|
| RS-232C Port Setting | Used to designate port settings and assign: Baud Rate, CTS/RTS, P-Break, and LPP. | COM1<br>+ **FLEX1** + **FLEX1** + **7** (38400, Baudrate) + **[HOLD/SAVE]**<br><br>COM2<br>+ **FLEX2** + **FLEX1** + **6** (19200, Baudrate) + **[HOLD/SAVE]** | VALUES –<br>COM1-COM5(Refer to Table)<br>FLEX 1-FLEX4 (Refer to Table) |

**PORT Description Table**

| FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | COM1 Port Setting | FLEX 1-4 | | |
| 2 | COM2 Port Setting | FLEX 1-4 | | MODU Port Setting (ipLDK-20) |
| 3 | COM3 – MODU Port Setting | FLEX 1-4 | | Not in ipLDK-20 |
| 4 | COM4 – MISB Port Setting | FLEX 1-4 | | ipLDK-300/300E Only |
| 5 | COM5- MISB Port Setting | FLEX 1-4 | | ipLDK-300/300E Only |

**PORT SETTING FLEXIBLE BUTTON TABLE**

| FLEX | ITEM | VALUE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | BAUDRATE | 0-7(Note1) | 19200 | 0 = N/A 1 = N/A<br>2 = 1200 Baud 3 = 2400 Baud<br>4 = 4800 Baud 5 = 9600 Baud<br>6 = 19200 Baud 7 = 38400 Baud |
| 2 | CTS/RTS | ON/OFF | OFF | |
| 3 | P-BREAK | ON/OFF | OFF | |
| 4 | LPP | 001-199 | 060 | |

## 3.4.16 PRINT PORT SELECTION (PGM 175)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **175.**
3. Follow the specific Procedure as listed in the Table.

| PGM 175 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Off-line SMDR/Statistics Print | Off-line SMDR data can be printed through this port. | + FLEX1 + VALUE (Range=1-11) + **[HOLD/SAVE]** | VALUES – ipDLK-20 01=COM1 02=COM2-MODU 03=TELNET1 04=TELNET2 05=TELNET3 06=ISDN 07=NET PCAdmin 08=NET PCAttendant 09=NET CTI 10=NET Remote<br><br>ipLDK-100 01=COM1 02=COM2 03=COM3-MODU 04=TELNET1 05=TELNET2 06=TELNET3 07=ISDN 08=NET PCAdmin 09=NET PCAttendant 10=NET CTI 11=NET Remote<br><br>ipLDK-300/300E 01=COM1 02=COM2 03=COM3-MODU 04=COM4-MISB 05=COM5-MISB 06=TELNET1 07=TELNET2 08=TELNET3 09=ISDN 10=NET PCAdmin 11=NET PCAttendant 12=NET CTI 13=NET Remote |
| ADMIN Data | When ADMIN 451 is used, the ADMIN data can be printed through this port. | + FLEX2 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| Traffic | Traffic analysis data can be printed through this port. | + FLEX3 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| SMDI Print | SMDI data can be printed through this port. | + FLEX4 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| Call Information | Call information data can be printed through this port. | + FLEX5 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| Info/On-line SMDR | On-line SMDR data can be printed through this port. | + FLEX6 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| Trace | Trace data can be printed through this port. | + FLEX7 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| Debug | Debug data can be printed through this port. | + FLEX8 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| PC Admin | PC Admin can be connected through this port, and is automatically detected if a connection is attempted from a different type. | + FLEX9 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| PC Attendant | PC Admin can be connected through this port. | + FLEX10 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| CTI | CTI can be connected through this port. | + FLEX11 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |
| Remote Diagnostic | Remote Diagnostic data can be printed through this port. | + FLEX12 + VALUE (Range=1-11) + **[HOLD/SAVE]** | |

## 3.4.17 PULSE DIAL RATIO (PGM 176)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **176.**
3. Follow the specific Procedure as listed in the Table.

| PGM 176 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Pulse Dial Ratio | Pulse dial speed ratio is set only for 10 PPS. | + **FLEX1** + **0** (refer to VALUES) + **[HOLD/SAVE]** | VALUES – 0 = 10 PPS 60/40% 1 = 10 PPS 66/33% 2 = 10 PPS 50/50% (Not in ipLDK-20) |

## 3.4.18 SMDR ATTRIBUTES (PGM 177)

Station Message Detail Recording (SMDR) will provide details on both incoming and outgoing calls. As an assignable database option, if All Call Record is selected, incoming and outgoing local and long distance calls are all provided. If only Long Distance is selected, then only outgoing calls that meet the toll check status requirements listed will be connected. In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **177.**
3. Follow the specific Procedure as listed in the Table.

| PGM 177 | Description | Procedure | COMMENTS |
|---|---|---|---|
| SMDR Save Enable | If this value is set to ON, maximum of 1000 SMDR data can be recorded in the System memory. | + FLEX1 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| SMDR Print Enable | If this value is set to ON, SDMR data can be printed real time through the serial/MODEM/LAN port. | + FLEX2 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Long Distance / All Call Recorded (SMDR Recording Call Type) | If this value is set to LD, only long distance outgoing CO calls will be recorded in the SMDR. If this value is set to ALL, all outgoing CO calls will be recorded by the SMDR. A long distance call is defined as a call that satisfies the condition of FLEX 4, or FLEX 14. | + FLEX3 + 0 (CALL) + **[HOLD/SAVE]** | VALUES – 0 = ALL CALL 1 = LD |
| SMDR Long Distance Call Digit Counter | Outgoing calls are measured to see if the digit counters are exceeded. If so, the call is considered a long distance call. | + FLEX4 + VALUE (Range=07-15) + **[HOLD/SAVE]** | VALUES – FLEX4, or FLEX14. |
| Print Incoming Call | If value is set to ON, all incoming calls can be printed. | + FLEX5 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Print Lost Call | If value is set to ON, lost calls are printed Lost calls are defined as calls that are unanswered. | + FLEX6 + 1 (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Records in Detail | If this value is set to ON, not only total calls, total metering count and total cost for individual Station, but also the detailed call records are saved up to a maximum of 5000. If this value is set to OFF, only total calls, total metering count and total cost for individual Station information will be recorded. | + FLEX7 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| SMDR Dial Digit Hidden | If this value is set non-zero value, the printed digits from right or left will be replaced with a '*' symbol up to the designated value. The direction of right or left can be set at ADMIN program 177 – FLEX 13. | + FLEX8 + VALUE (Range=0-9) + **[HOLD/SAVE]** | VALUES – 0-9 |
| SMDR Currency Unit | For easy identification of call costs, the currency unit can be entered with 3 alphabet characters to be printed in front of call charge amount. | + FLEX9 + VALUE (3 characters, refer to Keyset Map) + **[HOLD/SAVE]** | |

**Keyset Map**

| | | |
|---|---|---|
| . – 13<br>Q – 11<br>Z – 12<br>1 – 10 | A – 21<br>B – 22<br>C – 23<br>2 – 20 | D – 31<br>E – 32<br>F – 33<br>3 – 30 |
| G – 41<br>H – 42<br>I – 43<br>4 – 40 | J – 51<br>K – 52<br>L – 53<br>5 – 50 | M – 61<br>N – 62<br>O – 63<br>6 – 60 |
| P – 71<br>Q – 72<br>R – 73<br>S – 74<br>7 – 70 | T – 81<br>U – 82<br>V – 83<br>8 – 80 | W – 91<br>X – 92<br>Y – 93<br>Z – 94<br>9 – 90 |
| ∗1–Blank<br>∗2 - :<br>∗3 - , | 0 – 00 | # |

| PGM 177 | Description | Procedure | COMMENTS |
|---|---|---|---|
| SMDR Cost Per Unit Pulse | The metering pulse used to measure call cost per unit which is sent from the Central Office. | + FLEX10 + **001000** (Range=6 digits) + **[HOLD/SAVE]** | |
| SMDR Fraction | This value means the decimal position point of the cost per unit pulse. | + FLEX11 + VALUE (Range=0-5) + **[HOLD/SAVE]** | |
| SMDR Start Timer | If this value is set non-zero value, only the outgoing CO call more than this value time is served SDMR. | + FLEX12 + *Timer* (Range=000-250) + **[HOLD/SAVE]** | |
| SMDR Hidden Digit | If this value is set to RIGHT, SDMR digit hiding is executed in the right-to-left direction (ex., dialed number '1234567890,' would be shown as '12345*****'.<br>If this value is set to LEFT, SDMR digit hiding is executed to left-to-right direction, (ex., dialed number '1234567890,' would be shown as '*****67890.' | + FLEX13 + 0 (Left) + **[HOLD/SAVE]** | VALUES –<br>0 = LEFT<br>1 = RIGHT |
| SMDR Long Distance Codes | A long distance call is defined as a call that satisfies the condition of ADMIN program 177 – FLEX 4, or ADMIN program 177 – FLEX 14. | **+** FLEX14 + FLEX1 (Range=FLEX1-5) + **1** (Up to 2 digits, Range= *,#,0-99) + **[HOLD/SAVE]** | VALUES –<br>Default = 0<br>Maximum of 5 SMDR long distance codes (FLEX1-FLEX5) |
| MSN Print on SMDR | If this value is set to ON, the MSN number is printed instead of the Station number when an outgoing MSN call is made. | + FLEX15 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Print Caller Number | If this value is set to ON, the caller number is printed when receiving an incoming SMDR call. | + FLEX16 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF, 1 = ON |
| ICM SMDR Save | If this value is set to ON, ICM call data is stored in Off-line SMDR. | + FLEX17 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF, 1 = ON |
| ICM SMDR Print | If this value is set to ON, ICM call data is printed in On-line SMDR. | + FLEX18 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF, 1 = ON |
| SMDR Interface service | If this value is set to ON, SMDR format for CIS, INDIA, KOREA is serviced.<br>If this value is set to ON, SMDR data is saved and sent when there's SMDR data request from application software. When using SMDR interface service, normal Off-line SMDR cannot be saved nor printed. | + FLEX19 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| I-SMDR connection type | This program determines port to be used for printer when SMDR interface service is set.<br>SMDR Interface is served through LAN or SIO. | + FLEX20 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = SIO<br>1 = LAN |
| I-SMDR Author Index | If this value is set to ON, SMDR data include Authorization code index. | + FLEX19 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF / 1 = ON |

## 3.4.19 SYSTEM TIME/DATE SETTING (PGM 178)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **178.**
3. Follow the specific Procedure as listed in the Table.

| PGM 178 | Description | Procedure | COMMENTS |
|---|---|---|---|
| System Time | Sets the System time; Hour/Min in sequence (ex., for 11:30, enter 1130). | + FLEX1 + VALUE (4 digits) + **[HOLD/SAVE]** | |
| System Date | Sets the System Date; Month/Day/Year in sequence (ex., for 27/January/2004, enter 270104). | + FLEX2 + VALUE (MMDDYY) + **[HOLD/SAVE]** | |

## 3.4.20 LINKED STATION PAIRS (PGM 179)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **179.**
3. Follow the specific Procedure as listed in the Table.

| PGM 179 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Linked Station Pairs | Review of the programmed linked station pairs can be accessed at flexible button 1 sub-menu. Registration and delete of the linked Station pairs can be set at flexible button 2 sub-menu. If linked pairs are assigned to a wired (DKT or SLT) and wireless station (WHTU), the wired Station should be assigned as the master Station. NOTE–When there are too many stations to see, you can scroll data using volume up/down key. | Review Linked Station Pairs:<br>+ FLEX1<br><br>Linked Station Pair (Registration):<br>+ FLEX2 + Master Station Number + Slave Station Number + **[HOLD/SAVE]**<br><br>Linked Station Pair (Delete):<br>+ FLEX2 + *Master Station Number* (PGM NUMBER)+ **[SPEED]** + **[HOLD/SAVE]** | VALUES –<br>FLEX1 = VIEW<br>FLEX2 = INPUT<br>100-147 |

## 3.4.21 CIDU SETTING (PGM 185)

This program defines the analog CO line CLI information when using a CID hardware device unit. The ipLDK uses the CIDU to decode analog CO line CLI that is carried through the analog CO lines, and provides the software for the related caller ID service. In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **185.**
3. Follow the specific Procedure as listed in the Table.

| PGM 185 | Description | Procedure | COMMENTS |
|---|---|---|---|
| CID Usage | If this value is set to ON, CID can be provided. | + FLEX1 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| CID Name Display | If this value is set to 1, the caller's name will be displayed on the LCD.<br>If this value is set to 0, the caller's telephone number will be displayed on the LCD. | + FLEX2 + 1 (NAME) + **[HOLD/SAVE]** | VALUES –<br>0 = TELEPHONE NO.<br>1 = NAME |
| Serial Port Select | Designates the port used for connecting to the external CIDU hardware device.<br>*NOTE—When there are too many Cos to see, you can scroll data using volume up/down key.* | + FLEX3 + **1** (COM Port) + **[HOLD/SAVE]** | VALUES –<br>1 |
| CID/CO Line Port Mapping | Designates the CIDU port and the analog CO line port mapping. | + FLEX4 + FLEX1 + *CO Number* (Range=00-11) + **[HOLD/SAVE]** | VALUES –<br>00-11 |
| Initialize CID Data | Used to reset the default values. | + FLEX5 + *CO Number* + **[HOLD/SAVE]** | VALUES –<br>NONE |
| CID Type 2 Usage | If this value is set to ON, CID type 2 service can be used.<br>*NOTE—Only CID type 1 is serviced.* | + FLEX6 + FLEX1 + **1** + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| FAST CID MODE | If this value is set to ON, CID will be displayed after the 1st ring at a Station.<br>*NOTE—If the CID SLT does not support non-standard CID, there could be problems displaying correct CID information.* | + FLEX7 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

# 3.5 System Timers (PGM 180-184)

## 3.5.1 SYSTEM TIMERS I (PGM 180)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **180.**
3. Follow the specific Procedure as listed in the Table.

| PGM 180 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Attendant Recall Timer | If a recalled call arrives at the Attendant Station, and the Attendant does not answer within the designated time, the System will disconnect the call. | + FLEX1 + *Minutes* (2 digits, Range=00-60) + **[HOLD/SAVE]** | |
| Call Park Recall Timer | Designates the amount of time before a call placed in a call park location will recall at the Station that placed the call on park. | + FLEX2 + *Seconds* (3 digits, Range=000-600) + **[HOLD/SAVE]** | |
| Camp On Recall Timer | When a call is transferred using Camp-On to a busy Station, if the transferred-to Station does not answer the call, it will recall to the transferring station after the designated time expires. | + FLEX3 + *Seconds* (3 digits, Range=000-200) + **[HOLD/SAVE]** | |
| Exclusive Hold Recall Timer | Designates the amount of time before a call placed on System hold will recall at the Station that placed the call on hold. | + FLEX4 + *Seconds* (3 digits, Range=000-300) + **[HOLD/SAVE]** | |
| I-Hold Recall Timer | When a recalled call is not answered, it will recall to the Attendant after the designated time expires. | [+ FLEX5 + *Seconds* (3 digits, Range=000-300) + **[HOLD/SAVE]** | |
| Sys Hold Recall Timer | Designates the amount of time before a call placed on system hold will recall the station placing the hold. | + FLEX6 + *Seconds* (3 digits, Range=000-300) + **[HOLD/SAVE]** | |
| Transfer Recall Timer | Designates the amount of time a transferred call will ring at a transferred-to Station, and how long it will recall at the transferring Station. | + FLEX7 + *Seconds* (3 digits, Range=000-300) + **[HOLD/SAVE]** | |
| ACNR Delay Timer | Designates the time delay when there is no available CO Line in the group. | + FLEX8 + *Seconds* (3 digits, Range=000-300) + **[HOLD/SAVE]** | |
| ACNR No Answer Timer | The system detects a CO ring back tone the CO party. If the call is not answered, the System will disconnect the call. | + FLEX9 + *Seconds* (2 digits, Range=00-50) + **[HOLD/SAVE]** | |
| ACNR Pause Timer | When ANCR Pause Timer expires, ACNR is activated. | + FLEX10 + *Seconds* (3 digits, Range=005-300) + **[HOLD/SAVE]** | |
| ACNR Retry Counter | ACNR is executed up to this value. After the timer expires, ACNR is canceled. | + FLEX11 + VALUE (2 digits, Range=01-30) + **[HOLD/SAVE]** | |
| ACNR No Tone Retry Counter | Determines the number of attempts to secure a CO line for ACNR. If a CO line is not seized, ACNR will be canceled. | + FLEX12 + VALUE (1 digit, Range=1-9) + **[HOLD/SAVE]** | |
| ACNR Tone Detect Timer | When a call to a busy Station is made, the CPTU attempts to detect the valid tone type until ANCR Tone Detect Timer expires. | + FLEX13 + *Seconds* (3 digits, Range=001-300) + **[HOLD/SAVE]** | |

| PGM 180 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Automatic CO Release Timer | Uncompleted CO line calls will automatically be released when the timer expires. | + FLEX14 + *Seconds* (3 digits, Range=020-300) + **[HOLD/SAVE]** | |
| CCR Inter-digit Timer | Used for the CCR inter-digit timer in the DISA/DID CO line. In DID type 2, it is used for the DID inter-digit timer. | + FLEX15 + M*seconds* (3 digits, Range=000-255) + **[HOLD/SAVE]** | |
| CO Call Drop Warning Timer | On prepaid CO calls, the System will give a warning tone designating prepaid amount has been used. After the timer expires, the call will be disconnected. Also used for call drop warning in Unsupervised Conferences. | + FLEX16 + M*seconds* (2 digits, Range=00-99) + **[HOLD/SAVE]** | |
| CO Dial Delay Timer | Used to prevent illegal dialing in case of slow response from the Central Office Line or PBX. | + FLEX18 + VALUE (100 msec, 2 digits, Range=00-99) + **[HOLD/SAVE]** | |
| CO Release Guard Timer | Designates the amount of time before a CO line can be re-seized, after a CO call disconnects; controls the time necessary to guarantee an idle loop state when a line is released. | + FLEX19 + VALUE (100 msec, 3 digits, Range=001-150) + **[HOLD/SAVE]** | |
| CO Ring Off Timer | Used to designate the time interval between incoming ringing signals so that active ringing can be retained in the System until the timer expires. | + FLEX20 + VALUE (100 msec, 3 digits, Range=001-150) + **[HOLD/SAVE]** | |
| CO Ring On Timer | Controls the time necessary to detect an incoming CO call ringing into the System. | + FLEX21 + VALUE (100 msec, 1 digit, Range=1-9)+ **[HOLD/SAVE]** | |
| CO Warning Tone Timer Korea Only | Determines the amount of time before receiving a warning tone as a reminder of the elapsed call time on an outgoing CO line conversation. | + FLEX22 + *Seconds* (3 digits, Range=060-900) + **[HOLD/SAVE]** | |

## 3.5.2 SYSTEM TIMERS II (PGM 181)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **181.**
3. Follow the specific Procedure as listed in the Table.

| PGM 181 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Call Forward No Answer Timer | If value is set for no answer call forward, when the Station does not answer, then the call will be routed to the assigned forward destination following expiration of the timer. | + FLEX1 + *Seconds* (3 digits, Range=000-255) + **[HOLD/SAVE]** | |
| DID/DISA No Answer Timer | Used for DID or DISA call routing. If the station doesn't answer a DID/DISA call during within the time allowed, the call will be routed to the assigned ADMIN program 167 – FLEX 3 value. | + FLEX2 + *Seconds* (2 digits, Range=00-99) + **[HOLD/SAVE]** | |
| VMIB User Record Timer | Designates the maximum time a Station user can record their VMIB announcement. | + FLEX3 + *Seconds* (3 digits, Range=010-255) + **[HOLD/SAVE]** | |
| VMIB Valid User Message Timer | If this value is set to 0, the VMIB announcement can not be recorded; designates the minimum time that a Station user must record their VMIB announcement. | + FLEX4 + *Seconds* (1 digit, Range=0-9) + **[HOLD/SAVE]** | |
| Door Open Time | Designates the length of time needed to execute the door open relay. | + FLEX5 + VALUE (100 msec, 2 digits, Range=05-99) + **[HOLD/SAVE]** | |

| PGM 181 | Description | Procedure | COMMENTS |
|---|---|---|---|
| ICM Box Timer | Designates the ringing time of the ICM box at a Station, when the ICM box user press the [CALL] button. | + FLEX6 + *Seconds* (2 digits, Range=00-60) + **[HOLD/SAVE]** | |
| ICM Dial Tone Timer | Designates the time when an off-hook Station will play the intercom dial tone before an error tone is provided. | + FLEX7 + *Seconds* (2 digits, Range=01-20) + **[HOLD/SAVE]** | |
| Inter-digit Timer | Designates the maximum time between digits, before an error tone is provided. | + FLEX8 + *Seconds* (2 digits, Range=01-20) + **[HOLD/SAVE]** | |
| MSG Wait Reminder Tone Timer | Designates the amount of time between repeated message waiting reminder tones to the Station. | + FLEX9 + *Seconds* (2 digits, Range=00-60) + **[HOLD/SAVE]** | |
| Paging Timeout Timer | Designates the maximum time for a page. The System will automatically disconnect the page when the timer expires. | + FLEX10 + *Seconds* (3 digits, Range=000-255) + **[HOLD/SAVE]** | |
| Pause Timer | Used for speed dial or LNR; the ipLDK System sends the dialed digits to the outgoing CO line, after the designated time. | + FLEX11 + *Seconds* (1 digit, Range=1-9) + **[HOLD/SAVE]** | |
| Preset Call Forward Timer | After the timer expires, incoming calls will be forwarded to a predetermined Station. | + FLEX12 + *Seconds* (2 digits, Range=00-99) + **[HOLD/SAVE]** | |
| SLT DTMF Release Timer | | + FLEX13 + *Seconds* (2 digits, Range=01-20) + **[HOLD/SAVE]** | |
| 3 SOFT Auto Release Timer<br>3 soft BTN DKTU Only | In the 3 soft button menus, if no digits are pressed within the designated time, the DKTU will return to an Idle state. | + FLEX14 + *Seconds* (2 digits, Range=01-30) + **[HOLD/SAVE]** | |
| VM Pause Timer | | + FLEX15 + VALUE (100 msec, 2 digits, Range=01-99) + **[HOLD/SAVE]** | |
| Transit Connect Timer | Designates the amount of time before the master system sends a connect message to the slave system when using a pulse analog trunk. | + FLEX16 + VALUE (2 digits, Range=01-30) + **[HOLD/SAVE]** | |
| VMIB Message Rewind Timer | Designates the amount of time the system will wait for the Station User to press the [REWIND] button while listening to VMIB messages. | + FLEX17 + VALUE (2 digits, Range=01-99) + **[HOLD/SAVE]** | |
| LCO Connect Timer | If this timer expires after starting outgoing dial, the system regards that line as connected. So if there are any extra digits after this timer expires, the Pause is automatically added before the first added digit.<br>*NOTE—CIS only* | + FLEX18 + VALUE (2 digits, Range=01-20) + **[HOLD/SAVE]** | |
| LCO CPT Detect Timer | To check LCO status after LCO is connected, system assigns CPT periodically with this timer.<br>To activate this, CO – CO XFER CPT detect (PGM160 – F16) should be set to ON. | + FLEX19 + VALUE (2 digits, Range=01-20) + **[HOLD/SAVE]** | |
| Forward To VMIB Timer | If Auto Forward To VMIB feature (PGM113 – F14) is set for a station, the call is automatically forwarded to VMIB after this timer expired, so the caller can leave a voice message. | + FLEX20 + VALUE (2 digits, Range=20-60) + **[HOLD/SAVE]** | |

## 3.5.3 SYSTEM TIMERS III (PGM 182)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **182.**
3. Follow the specific Procedure as listed in the Table.

| PGM 182 | Description | Procedure | COMMENTS |
|---|---|---|---|
| SLT Hook Switch Bounce Timer<br>SLT Only | Designates the length of time needed to detect a valid on- or off-hook state. | + FLEX1 + VALUE (100 msec, 2 digits, Range=01-25) + **[HOLD/SAVE]** | |
| SLT Maximum Hook Flash Timer<br>SLT Only | Designates how long the User needs to press the hook switch to register a FLASH (Timed-Break Recall). | + FLEX2 + VALUE (10 msec, 3 digits, Range=001-250) + **[HOLD/SAVE]** | |
| SLT Minimum Hook Flash Timer<br>SLT Only | Used to designate the minimum time for the System to register a hook flash. | + FLEX3 + VALUE (10 msec, 3 digits, Range=000-250) + **[HOLD/SAVE]** | |
| SLT Ring Phase Timer | Designates the ring phase or cadence (ex., 5 SEC: 1SEC ON / 4SEC OFF). | + FLEX4 + VALUE (10 msec, 1 digits, Range=2-5) + **[HOLD/SAVE]** | |
| Station Auto Release Timer | If a Station hears a ring back tone and no action is taken within the designated time the Station will be released. | + FLEX5 + VALUE (10 msec, 3 digits, Range=020-300) + **[HOLD/SAVE]** | |
| Unsupervised Conference Timer | Designates the amount of the time an unsupervised conference can continue after the initiator of the conference has exited. | + FLEX6 + *Minutes* (2 digits, Range=00-99) + **[HOLD/SAVE]** | |
| Wake-Up Fail Ring Timer | Designates the amount of time a Wake-up Fail Ring will ring at the System Attendant Station. | + FLEX7 + *Minutes* (2 digits, Range=00-99) + **[HOLD/SAVE]** | |
| Warm Line Timer | Designates the amount of time before a warm line state exists on an idle line after lifting handset or pressing the [MON] button. | + FLEX8 + *Seconds* (2 digits, 01-20) + **[HOLD/SAVE]** | |
| Wink Timer | Designates the amount of time needed to acknowledge a signal on a DID line. | + FLEX9 + VALUE (10 msec, 3 digits, Range=010-200) + **[HOLD/SAVE]** | |
| Enblock Digit Timer | Designates the amount of time allowed before enblock dialing is activated when the User is making an enblock dialing mode call. | + FLEX10 + VALUE (10 sec, 2 digits, Range=01-20) + **[HOLD/SAVE]** | |
| CCR Time Out Timer | When this timer expires, CCR is activated. | + FLEX11 + *Seconds* (2 digits, Range=000-300) + **[HOLD/SAVE]** | |
| DID Inter Digit Timer | Designates the amount of time before call routing of DID type 2 is executed. | + FLEX12 + *Seconds* (2 digits, Range=01-20) + **[HOLD/SAVE]** | |
| FAX Tone Detect Timer<br>*(ipLDK-20 Only)* | Designates the amount of time allowed to detect a FAX tone from the FAX CO line before the call is routed to the ring assigned Station for FAX CO line. | + FLEX13 + *Seconds* (2 digits, Range=01-10) + **[HOLD/SAVE]** | 5 sec is suggested. |
| FAX CO Call Timer<br>*(ipLDK-20 Only)* | Designates the amount of time allowed to connect a call when a FAX tone is detected from FAX CO line; the call will attempt to be routed to the appropriate FAX Station. | + FLEX14 + Minutes (1 digit, Range=1-5) + **[HOLD/SAVE]** | |

## 3.5.4 IN-ROOM INDICATION (PGM 183)

The Supervisor Station can set the In-Room Indication for all members in the same Group up to 10 bins can be programmed, and each bin has (at most) 20 members excluding the Supervisor.

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **183.**
3. Enter bin number (01-10).
4. Follow the specific Procedure as listed in the Table.

| PGM 183 | Description | Procedure | COMMENTS |
|---|---|---|---|
| In-Room Indication Supervisor | The Supervisor Station can Turn ON or OFF the In-Room Indication button of every member in the same bin. | + FLEX1 + Station Number + **[HOLD/SAVE]** | |
| In-Room Indication Member | Each Member can see the status of In-Room Indication button according to the Supervisor settings. | + FLEX2 + Station Range + **[HOLD/SAVE]** | |

## 3.5.5 CHIME BELL (PGM 184)

The Chime Bell feature enables the Executive Station to call the corresponding Secretary Station by pressing a Chime Bell-programmed feature button. The Secretary Station will present the Chime Bell ring, which cannot be answered. This feature is intended for use by the Executive to summon the Secretary to his office.

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **184.**
3. Follow the specific Procedure as listed in the Table.

| PGM 184 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Chime Bell Station Pair | Similar to Executive/Secretary Pairs, the Chime Bell Stations are linked as an originating Station and receiving Station, activated by pressing the Chime Bell-programmed button. | + FLEX1 + Bin Number (01-14) + Station Pair + **[HOLD/SAVE]** | |
| Chime Bell Relay | If Chime Bell Relay is assigned, the external relay makes signal at the same time like Loud Bell Control. | + FLEX2 + Bin Number(2 digits, Range=01-14) + Relay number(1digit, Range=1-4) + **[HOLD/SAVE]** | |
| Bell Timer | Chime Bell Receive Station receives Chime bell ring until this timer expires. | + FLEX3 + Value (2 digits, Range=01-20 seconds) + **[HOLD/SAVE]** | |
| Bell Frequency | Chime Bell Frequency can be adjusted by this feature. | + FLEX4 + FLEX1-FLEX2 + Value(2digits, Range=01-20) + **[HOLD/SAVE]** | |

# 3.6 DCOB Attribute

***NOTE—Not available in ipLDK-20.***

## 3.6.1 DCOB ATTRIBUTE– I (PGM 186)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **186.**
3. Follow the specific Procedure as listed in the Table.

| PGM 186 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Metering Type | Use call metering signal. | + FLEX2 + Value + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| R2 OUT Manage Timer | In R2-DCO signaling, maximum time for waiting for forward signal from PBX (1 sec) | + FLEX3 + Time (2digits, Range=01-50seconds) + **[HOLD/SAVE]** | |
| R2 IN Manage Timer | In R2 signaling, maximum time for waiting for forward signal from PBX (1 sec) | + FLEX4 + Time (2digits, Range=01-50seconds) + **[HOLD/SAVE]** | |
| R2 Disappear Timer | | + FLEX5 + Time (2digits, Range=01-50seconds) + **[HOLD/SAVE]** | |
| R2 Pulse Timer | In R2 signaling, time duration to send pulse typed R2 signal (20 msec) | + FLEX6 + Time (2digits, Range=01-30) + **[HOLD/SAVE]** | 20msec base |
| R2 Ready Timer | | + FLEX7 + Time (3digits, Range=000-500) + **[HOLD/SAVE]** | 20msec base |
| Dial Tone Delay Timer | | + FLEX8 + Time (2digits, Range=01-30seconds) + **[HOLD/SAVE]** | |
| Line Status | | + FLEX9 + Value (1digits, Range=1-9)+ **[HOLD/SAVE]** | |
| Calling Category | | + FLEX10 + Value (1digits, Range=1-9)+ **[HOLD/SAVE]** | |
| DNIS Service | Request the CID to the calling party. | + FLEX11 + Value + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| CLI Digit Num | | + FLEX12 + Value (2digits, Range=01-10 Digits) + **[HOLD/SAVE]** | |
| R2 OUT DIGIT TIMER | If outgoing dial is not performed within this timer, the R2 outgoing call is failed. | + FLEX13 + Value (2digits, Range=01-50digits) + **[HOLD/SAVE]** | |
| R2 ERROR PROMT USAGE | If R2 outgoing call is made and the ERROR signal is received (error in the traffic or etc.), the caller will hear an error announce to call again. If there's no available VMIB, the system error tone is heard. | + FLEX14 + Value + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| R2 BUSY PROMT USAGE | If R2 outgoing call is made and the BUSY signal is received (the destination is busy), the caller will hear the busy announce. If there's no available VMIB, the system busy tone is heard. | + FLEX15 + Value + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |

| PGM 186 | Description | Procedure | COMMENTS |
|---|---|---|---|
| R2 ANNOUNCE PROMT USAGE | If R2 outgoing call is made and the ANNOUNCE signal is received (if the destination number is invalid or etc.), the caller will hear the error announce to call again. If there's no available VMIB, the system error tone is heard. | + FLEX16 + Value + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| DCO Gain | | + FLEX20 + Value + **[HOLD/SAVE]** | VALUES –<br>1-63 |

## 3.6.2 DCOB ATTRIBUTE–II (PGM 187)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM**] button.
2. Dial **187.**
3. Follow the specific Procedure as listed in the Table.

| PGM 187 | Description | Procedure | COMMENTS |
|---|---|---|---|
| IN Digit Type | Select the incoming digit information signaling type of DCO. | + FLEX1 + CO Line Range + Type (1digit, Range=0-2) + **[HOLD/SAVE]** | TYPE–<br>0= PULSE<br>1=DTMF<br>2=R2MFC |
| OUT Digit Type | Select the outgoing digit information signaling type of DCO. | + FLEX2 + CO Line Range + Type (1digit, Range=0-2) + **[HOLD/SAVE]** | TYPE–<br>0= PULSE<br>1=DTMF<br>2=R2MFC |
| CLI Digit Number | Set the digit numbers received for CLI | + FLEX3 + CO Line Range + Value (2digits, Range=01-15digits) + **[HOLD/SAVE]** | |
| DCOB TYPE | Select DCO CO line service type. According to the country, DCO CO service type is different. | + FLEX4 + Value (1digit, Range=0-4) + **[HOLD/SAVE]** | VALUE–<br>0 = Sweden/Cyprus<br>1 = Italy<br>2 = Korea/Australia<br>3 = Brazil<br>4 = India |
| SEND S-BLOCK COMMAND | If this value is set to ON, the DCO line send S-Block command to PX. | + FLEX5 + Value (1digit, Range=0-1) + **[HOLD/SAVE]** | VALUE–<br>0 = OFF<br>1 = ON |

# 3.7 Station Group (PGM 190 – PGM 191)

## 3.7.1 STATION GROUP ASSIGNMENT (PGM 190)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **190.**
3. Enter the appropriate *Hunt Group Number.*
4. Follow the specific Procedure as listed in the Table.

| PGM 190 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Group Type | Assigns the Hunt Group type: circular/terminal/UCD/ring/VM/pick-up/networking VM. | + FLEX1 + *Group Type* (refer to VALUES) + **[HOLD/SAVE]** | VALUES – <br>0 = Not Assigned <br>1 = Circular <br>2 = Terminal <br>3 = UCD <br>4 = Ring <br>5 = VM <br>6 = Pick up <br>7 = Networking VM |
| Pick up Attribute | Assign the pick-up attributes for the Hunt Group. All types of Hunt Groups can be assigned the optional pick-up attribute, except for the pick-up hunt group. | + FLEX2 + **1** (ON) + **[HOLD/SAVE]** | VALUES – <br>0 = OFF <br>1 = ON |
| Member Assignment | This member assignment process can be executed in two ways: <br>Assigning individually by pressing the Flexible Button and the desired User to assign and then enter the Station number. The other way is to successively assign, by first entering the Station number and last Station number. <br>*NOTE: When there are too many Stations to see, you can scroll data using the volume up/down keys.* | + FLEX3 + *Station Number* + **[HOLD/SAVE]** | VALUES – <br>10-37 (ipLDK-20) <br>100-227 (ipLDK-100) <br><br>100-399 (ipLDK-300) <br>1000-1599 (ipLDK-300E) |

## 3.7.2 STATION GROUP ATTRIBUTES (PGM 191)

If the Hunt Group type is selected at ADMIN PGM 190, then the attributes of each Hunt Group can be programmed at ADMIN PGM 191. In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **191.**
3. Enter the appropriate *Hunt Group Number.*
4. Follow the specific Procedure as listed in the Table.

### *3.7.2.1 CIRCULAR/TERMINAL GROUP ATTRIBUTES*

| PGM 191 | Description | Procedure | Comments |
|---|---|---|---|
| VMIB Announce 1 Timer | If the call is not answered during the timer, the System will play the VMIB announcement that is programmed. | + **FLEX1** + *Seconds* (Range=000-999) + **[HOLD/SAVE]** | |
| VMIB Announce 2 Timer | The second VMIB announcement will be played if the call continues to wait beyond the expiration of the 2nd announcement timer. | + **FLEX2** + *Seconds* (Range=000-999) + **[HOLD/SAVE]** | |
| VMIB Announce 1 Location | Used to play the VMIB announcement, when the VMIB announce 1 timer expires. | + **FLEX3** + *VMIB Announcement Number* (Range=00-70) + **[HOLD/SAVE]** | |
| VMIB Announce 2 Location | Used to play the VMIB announcement, when the VMIB Announce 2 timer expires. | **FLEX4** + *VMIB Announcement Number* (Range=00-70) + **[HOLD/SAVE]** | |
| VMIB Announce 2 Repeat Timer | Used to repeat the VMIB announce 2 when the timer expires. | + **FLEX5** + *Seconds* (Range=001-999) + **[HOLD/SAVE]** | VALUES – 000 = Not Assigned |
| VMIB Announce 2 Repeat Enable/Disable | Used to enable or disable the VMIB Announce 2 Repeat. | + FLEX6 + **1** (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Overflow Destination | Calls to a Station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to the overflow station/group/ VMIB/System Speed bin, after the overflow timer expires. | + **FLEX7** + **VALUE** (Destination Type, Range 1-4) + **VALUE** (STA/Hunt Group/VMIB/Speed Bin) **+ [HOLD/SAVE]** | VALUES – 1 = Station # 2 = Hunt # 3 = VMIB 00-70 (00: Note Assigned) 4 = System Speed # 2000-2499 (ipLDK-20) 2000-3499 (ipLDK-100) 2000-4999 (ipLDK-300) 2000-6999 (ipLDK-300E) |
| Overflow Timer | If timer expires after a call is received in the group, the call will be routed to the overflow destination. | + **FLEX8** + *Seconds* (Range=000-600) + **[HOLD/SAVE]** | |
| Wrap-up Timer | Designates the amount of time a call will be held in a busy state following expiration of the timer. | + **FLEX9** + *Seconds* (Range=002-999) + **[HOLD/SAVE]** | |
| No Answer Timer | In circular/terminal Hunt Group, if the incoming call is not answered during the designated amount of time, the call will be routed to the next idle station in the group. | + **FLEX10** + *Seconds* (Range=00-99) + **[HOLD/SAVE]** | |
| Pilot Hunt | If this value is set ON, calls to each Hunt Group member will be processed as a call to the Hunt Group. A circular/terminal Hunt Group can be assigned with a pilot number so that only calls to the pilot number will be treated as calls to the Hunt Group. | + FLEX11 + 0 (OFF) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |

| PGM 191 | Description | Procedure | Comments |
|---|---|---|---|
| Alt If No Member | If a member is not on duty, intercom calls will be dropped and CO incoming calls will be routed to the designated overflow destination, or will ring at the assigned Station if the overflow destination is not assigned. | + FLEX12 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Music Source | If a music source is assigned, the User will be able to hear music instead of a ring back tone. | + **FLEX13** + *Music Source* (refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>0 = Not assigned by this field.<br><br>ipLDK-20<br>0 = Not assigned<br>1 = Internal Music<br>2 = External Music<br>3 = VMIB MOH<br>4-8 = SLT MOH<br><br>ipLDK-100<br>0 = Not assigned<br>1 = Internal Music<br>2-4 = External Music<br>5-6 = VMIB MOH<br>7-11 = SLT MOH<br><br>ipLDK-300/300E<br>0 = Not assigned<br>1 = Internal Music<br>2-4 = External Music<br>5-7 = VMIB MOH<br>8-12 = SLT MOH |
| Alt Destination | If no members are on duty or all members are busy, incoming CO calls will be routed to an alternate destination. | + **FLEX14** + *Destination Type* (refer to VALUES) + *Station or Hunt Group Number* + **[HOLD/SAVE]** | VALUES –<br>1 = STA #<br>2 = Hunt # |
| MAX Queue Count | If no members are on duty or all members are busy, incoming CO calls will be queued. The Hunt Group Supervisor will be able to see the incoming call queue count until the max queue count is attained. | + **FLEX15** + VALUE (2 digits, Range=00-99) + **[HOLD/SAVE]** | |
| Hunt Member forward | If this value is set to OFF, Hunt Calls will be received. If set to ON, Hunt Calls will not be received. | + FLEX16 + VALUE + **[HOLD/SAVE]** | VALUES – 0 = OFF<br>1 = ON |
| Queue Count Display | If this value is set to ON, a Hunt member can check the Queue Count. | + FLEX17 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Group Name Assign | Group Name can be assigned at this Admin field. | + FLEX18 + VALUE + **[HOLD/SAVE]** | |

### *3.7.2.2 UCD GROUP ATTRIBUTE*

| PGM 191 | Description | Procedure | COMMENTS |
|---|---|---|---|
| VMIB Announce 1 Timer | If the call is not answered during the timer, the System will play the VMIB announcement that is programmed. | + **FLEX1** + *Seconds* (Range=000-999) + **[HOLD/SAVE]** | |
| VMIB Announce 2 Timer | The second VMIB announcement will be played if the call continues to wait beyond the expiration of the 2nd announcement timer. | + **FLEX2** + *Seconds* (Range=000-999) + **[HOLD/SAVE]** | |
| VMIB Announce 1 Location | Used to play the VMIB announcement, when the VMIB announce 1 timer expires. | + **FLEX3** + *Seconds* (Range=00-70) + **[HOLD/SAVE]** | |
| VMIB Announce 2 Location | Used to play the VMIB announcement, when the VMIB Announce 2 timer expires. | + **FLEX4** + *Seconds* (Range=00-70) + **[HOLD/SAVE]** | |
| VMIB Announce 2 Repeat Timer | Used to repeat the VMIB Announce 2 when the timer expires. | + FLEX5 + VALUE + **[HOLD/SAVE]** | VALUES –<br>000 = Not Assigned<br>001-999 |
| VMIB Announce 2 Repeat Enable/Disable | Used to enable or disable the VMIB Announce 2 Repeat. | + FLEX6 + **1** (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Overflow Destination | Calls to a Station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to the overflow station/group/ VMIB/System Speed bin, after the overflow timer expires. | + **FLEX7** + **Value** (Destination Type) + **Value** (STA/Hunt Group/VMIB/Speed Bin) + **[HOLD/SAVE]** | VALUES –<br>1 = Station #<br>2 = Hunt #<br>3 = VMIB 00-70(00: Note Assigned)<br>4 = System Speed #<br>2000-2499(ipLDK-20)<br>2000-3499(ipLDK-100)<br>2000-4999(ipLDK-300)<br>2000-6999(ipLDK-300E) |
| Overflow Timer | If timer expires after a call is received in the group, the call will be routed to the overflow destination. | + **FLEX8** + *Seconds* (Range=000-600)+ **[HOLD/SAVE]** | |
| Wrap-up Timer | Designates the amount of time a call will be held in a busy state following expiration of the timer. | + **FLEX9** + *Seconds* (Range=002-999)+ **[HOLD/SAVE]** | |
| Alt If No Member | If a member is not on duty, intercom calls will be dropped and CO incoming calls will be routed to the designated overflow destination, or will ring at the assigned Station if the overflow destination is not assigned. | + FLEX10 + **1** (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

| PGM 191 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Music Source | If a music source is assigned, User will be able to hear music instead of a ring back tone. | + FLEX11 + **VALUE** (Music Source) + **[HOLD/SAVE]** | VALUES –<br>0 = Not assigned by this field.<br><br>ipLDK-20<br>0 = Not assigned<br>1 = Internal Music<br>2 = External Music<br>3 = VMIB MOH<br>4-8 = SLT MOH<br>9 = Hold Tone<br><br>ipLDK-100<br>0 = Not assigned<br>1 = Internal Music<br>2-4 = External Music<br>5-6 = VMIB MOH<br>7-11 = SLT MOH<br>12 = Hold Tone<br><br>ipLDK-300/300E<br>0 = Not assigned<br>1 = Internal Music<br>2-4 = External Music<br>5-7 = VMIB MOH<br>8-12 = SLT MOH<br>13 = Hold Tone |
| ACD Warning Tone | When a call is received in the Group, and no Stations are available, the call will be routed to the assigned destination. | + FLEX12 + 0 (Off) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Alternate destination | When a call is received in the Group, and no Stations are available, the call will be routed to the assigned destination. | + FLEX13 + **Value** (Range=1-2, refer to VALUES) + *STA/Hunt Group Number* + **[HOLD/SAVE]** | VALUES –<br>1 = STATION<br>2 = HUNT |
| Supervisor Timer | When a call is received in the Group, and no Stations are available, the call will be queued. If the total queued call count is more than the supervisor call count (ACD queued call ADMIN program value is set to ON), and the queued time is longer than this timer, then the counts of queued calls will be displayed on the Supervisor's LCD. | + FLEX14 + *Seconds* (Range=000-999)+ **[HOLD/SAVE]** | |
| Supervisor Call Count | If the number of queued calls is more than Supervisor Call Count, the supervisor timer will be started. | + FLEX15 + *Seconds* (Range=00-00)+ **[HOLD/SAVE]** | |
| ACD Queued Call | If this value is set to ON, the count of queued calls can be displayed on the Supervisor Station LCD. | + FLEX16 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

| PGM 191 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Max Queued Call Count | The maximum call count that can be queued. If the total queued call count is achieved, the next queuing tried call will be disconnected. | + FLEX17 + *Seconds* (Range=00-99) + **[HOLD/SAVE]** | |
| Supervisor | Used to set the Supervisor Station number. | + FLEX18 + *STA Number* (Range=100-125) + **[HOLD/SAVE]** | |
| UCD hunt Stations' Priority | Used to set the UCD group member's priority. The value of 0 is the highest priority, and the value of 9 is the lowest priority. If the station has high priority, it takes more priority to receive the incoming call. | + FLEX19 + **VALUE** (1 digit, Range=0-9) + **[HOLD/SAVE]** | |
| Hunt Member forward | If this value is set to OFF, the Hunt Call will be received.<br>If set to ON, Hunt Call will not be received. | + FLEX20 + **VALUE** + [**HOLD/SAVE]** | VALUE –<br>0 = OFF<br>1 = ON |
| UCD DND Timer | If this timer set to 00 sec, this timer is not operated.<br>If this timer is set to 10, after 10-sec, ringing UCD member is automatically in the UCD DND state. | + FLEX21 + **VALUE** + [**HOLD/SAVE]** | VALUE –<br>00-60 |
| QUEUED TONE | If this value is set to ON, Muted ring is given to first UCD group member, when call is queued. Muted ring is given only one time during 0.4 sec. | + FLEX22 + 1 (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Group Name Assign | Group Name can be assigned at this Admin field. | + FLEX23 + VALUE + **[HOLD/SAVE]** | |

### *3.7.2.3RING GROUP ATTRIBUTE*

If the hunt group type is selected as RING, then the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **191.**
3. Enter the appropriate *Hunt Group Number.*
4. Follow the specific Procedure as listed in the Table.

| PGM 191 | Description | Procedure | COMMENTS |
|---|---|---|---|
| VMIB Announce 1 Timer | If the call is not answered during the timer, the System will play the VMIB announcement that is programmed. | + FLEX1 + *Seconds* (Range=000-999)+ **[HOLD/SAVE]** | |
| VMIB Announce 2 Timer | The second VMIB announcement will be played if the call continues to wait beyond the expiration of the 2nd announcement timer. | + FLEX2 + *Seconds* (Range=000-999)+ **[HOLD/SAVE]** | |
| VMIB Announce 1 Location | Used to play the VMIB announcement, when the VMIB announce 1 timer expires. | + FLEX3 + *Seconds* (Range=00-70) + **[HOLD/SAVE]** | |
| VMIB Announce 2 Location | Used to play the VMIB announcement, when the VMIB Announce 2 timer expires. | + FLEX4 + *Seconds* (Range=00-70) + **[HOLD/SAVE]** | |
| VMIB Announce 2 Repeat | Used to repeat the VMIB | + FLEX5 + *Seconds* | VALUES – |

| PGM 191 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Timer | announce 2 when the timer expires. | (Range=000-999) + **[HOLD/SAVE]** | 000 = Not Assigned |
| VMIB Announce 2 Repeat Enable/Disable | Used to enable or disable the VMIB Announce 2 Repeat. | + FLEX6 + **1** (ON) + [**HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Overflow Destination | Calls to a Station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to the overflow station/group/ VMIB/System Speed bin, after the overflow timer expires. | + FLEX7 + VALUE (Destination Type) + *STA/Hunt Group/VMIB/Speed Bin* (refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>1 = Station #<br>2 = Hunt #<br>3 = VMIB 00-70 (00: Note Assigned)<br>4 = System Speed # 2000-2499 (ipLDK-20) 2000-3499 (ipLDK-100) 2000-4999 (ipLDK-300) 2000-6999 (ipLDK-300E) |
| Overflow Timer | If timer expires after a call is received in the group, the call will be routed to the overflow destination. | + FLEX8 + *Seconds* (Range=000-600) + **[HOLD/SAVE]** | |
| Wrap Up Timer | Designates the amount of time a call will be held in a busy state following expiration of the timer. | + FLEX9 + *Seconds* (Range=002-999) + **[HOLD/SAVE]** | |
| Music Source | If a music source is assigned, User will be able to hear music instead of a ring back tone. | + FLEX10 + VALUE (Range=0-8, refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>0 = Not assigned by this field.<br>ipLDK-20<br>0 = Not assigned<br>1 = Internal Music<br>2 = External Music<br>3 = VMIB MOH<br>4-8 = SLT MOH<br>ipLDK-100<br>0 = Not assigned<br>1 = Internal Music<br>2-4 = External Music<br>5-6 = VMIB MOH<br>7-11 = SLT MOH<br>ipLDK-300/300E<br>0 = Not assigned<br>1 = Internal Music<br>2-4 = External Music<br>5-7 = VMIB MOH<br>8-12 = SLT MOH |
| Max. Queued Call Count | The maximum call count that can be queued. If the total queued call count is achieved, the next queuing call will be disconnected. | + FLEX11 + *Seconds* (Range=00-99) + **[HOLD/SAVE]** | |
| VMIB Supervisor | | + FLEX12 + *STA Number* (Range=100-125) + **[HOLD/SAVE]** | |
| Hunt Member Forward | If this value is set to OFF, the Hunt Call will be received. If set to ON, Hunt Call will not be received. | + FLEX13 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Queue Count Display | If this value is set to ON, Hunt Group members can check the Queue Count. | + FLEX14 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Group Name Assign | Group Name can be assigned at this Admin field. | + FLEX15 + VALUE + **[HOLD/SAVE]** | |

### *3.7.2.4 VM GROUP ATTRIBUTE*

| PGM 191 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Wrap-up Timer | Designates the amount of time a call will be held in a busy state following expiration of the timer. | + FLEX1 + *Seconds* (Range=002-999) + **[HOLD/SAVE]** | |
| Put Mail Index | One of the voice mail dialing tables. | + FLEX2 + VALUE (Range-1-4) + [**HOLD/SAVE]** | |
| Get Mail Index | One of the voice mail dialing tables. | + FLEX3 + VALUE (Range-1-4) + [**HOLD/SAVE]** | |
| Hunt Type | Used to set the hunt type for VM members. | + FLEX4 + **1** (Circular) + **[HOLD/SAVE]** | VALUES –<br>1 = CIRC (Circular Hunt Group)<br>2 = TERM (Terminal Hunt Group) |
| SMDI Port | The Simplified Message Desk Interface (SMDI) dictates the distribution of VM information. | + FLEX5 + *SMDI Port* (Range=01-11) + **[HOLD/SAVE]** | Need not to be programmed in ipLDK-20 |
| Overflow Timer | If the timer expires after a call is received in the group, the call will be routed to the overflow destination. | + FLEX6 + *Seconds* (Range=000-600)+ **[HOLD/SAVE]** | |
| Overflow Destination | Calls to a Station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to the overflow station/group/ VMIB/System Speed bin, after the overflow timer expires. | + FLEX7 + **Value** (Destination Type) + *STA/Hunt Group/VMIB/Speed Bin* (refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>1 = Station #<br>2 = Hunt #<br>3 = VMIB 00-70 (00: Note Assigned)<br>4 = System Speed #<br>2000-2499 (ipLDK-20)<br>2000-2499 (ipLDK-100)<br>2000-4999 (ipLDK-300)<br>2000-6999 (ipLDK-300E) |

### *3.7.2.5PICK-UP GROUP ATTRIBUTE*

If the hunt group type is selected to PICK-UP, then the following items can be customized:

1. Press the **[TRANS/PGM]** button.
1. Dial **191.**
1. Enter the appropriate *Hunt Group Number.*
1. Follow the specific Procedure as listed in the Table.

| PGM 191 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Auto Pickup | If this value is set to ON, and there is ringing at a hunt member, another hunt member can pickup the call automatically by pressing the **[MON]** button or going off-hook. | + FLEX1 + **1** (On)+ **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| All Ring | If this value is set to ON, and a hunt group member receives an intercom call, then all hunt group member Stations will ring.<br>*NOTE—Auto Pickup ADMIN program must be set to ON.* | + FLEX2 + **1** (On)+ **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

## 3.7.3 COLP TABLE (PGM 201)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **201**.
3. Follow the specific Procedure as listed in the Table.

| PGM 201 | Description | Procedure | COMMENTS |
|---|---|---|---|
| COLP Table | The COLP table is used for outgoing CLI (refer to the Section 2.14.2.2 of **ipLDK Feature Description and Operation manual**) | + *COLP Table Bin Number* (Range=00-49) + VALUE2 (Up to 10 digits) **+ [HOLD/SAVE]** | ADMIN program 143 – FLEX 1 and 2 |

# 3.8 LCR (PGM 220 – 223)

## 3.8.1 LCR ATTRIBUTES (PGM 220)

| FLEX | Item | | | Default | Remark(Value) |
|---|---|---|---|---|---|
| FLEX1 | LCR Access | | | M00 | M00 = Disable LCR<br>M01 = LCR shoes attribute is 'COL' can be accessed only through common CO access code("9"/"0")<br>M02 = Internal LCR and Loop LCR are activated.<br>M11 = Loop LCR and Direct CO LCR are activated.<br>M12 = All LCR types are activated. When the user dials ("9"/"0") or presses the loop button, the ipLDK will not seize a CO Line until LCR is finished.<br>M13 = All LCR types are activated. When the user dials ("9"/"0") or presses the loop button, ipLDK first seizes a CO Line and will wait to dial the following LCR. |
| FLEX2 | Day of Week | | | | Zone = 1-3<br>Day = 1-7:<br>1 = Monday<br>2 = Tuesday<br>3 = Wednesday<br>4 = Thursday<br>5 = Friday<br>6 = Saturday<br>7 = Sunday |
| | FLEX1 | Monday | | 1 | |
| | FLEX2 | Tuesday | | 1 | |
| | FLEX3 | Wednesday | | 1 | |
| | FLEX4 | Thursday | | 1 | |
| | FLEX5 | Friday | | 1 | |
| | FLEX6 | Saturday | | 1 | |
| | FLEX7 | Sunday | | 1 | |
| FLEX3 | Time of DAY Zone 1 | FLEX1 | Zone 1 | Zone 1 (00-24) | Zone = 3<br>Time = 00-24<br>ipLDK accepts it as same value for 00 and 24 changes to '00' if input is 24 as starting value and vice versa.<br>*NOTE–The time not belonging to any zone will be considered as zone 1.*<br>10-13 means 10:00:00-12:59:59. |
| | | FLEX2 | Zone 2 | | |
| | | FLEX3 | Zone 3 | | |
| FLEX4 | Time of DAY Zone 2 | FLEX1 | Zone 1 | | |
| | | FLEX2 | Zone 2 | | |
| | | FLEX3 | Zone 3 | | |
| FLEX5 | Time of DAY Zone 3 | FLEX1 | Zone 1 | | |
| | | FLEX2 | Zone 2 | | |
| | | FLEX3 | Zone 3 | | |

### *3.8.1.1LCR Access*

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **220.**
3. Follow the specific Procedure as listed in the Table.

| PGM 220 | Description | Procedure | COMMENTS |
|---|---|---|---|
| LCR Access Mode | This value is used to select the LCR access mode. | + FLEX1 + VALUE (Range=1-6) + **[HOLD/SAVE]** | VALUES –<br>1 = M00 (Disable LCR)<br>2 = M01 (Only Loop LCR)<br>3 = M02 (Internal and Loop LCR)<br>4 = M11 (Loop and Direct CO LCR)<br>5 = M12 (Internal, Loop and Direct CO LCR)<br>6 = M13 (Internal, Loop, Direct CO and Direct Loop LCR) |
| Day Zone | Used to set up the LCR setting; each day can be grouped up to 3 zone. | + FLEX2 + VALUE1 + VALUE2 + **[HOLD/SAVE]** | VALUES –<br>Value1: |

| PGM 220 | Description | Procedure | COMMENTS |
|---|---|---|---|
| | | | FLEX1 = Monday<br>FLEX2 = Tuesday<br>FLEX3 = Wednesday<br>FLEX4 = Thursday<br>FLEX5 = Friday<br>FLEX6 = Saturday<br>FLEX7 = Sunday<br>Value2 = Zone 1-3 (1 Digit) |
| Time Zone 1 of Day Zone1 | Each time of day zone1 can use different LCR setting; each time of day zone1 can be grouped up to 3 zones. The time not belonging to any zone will be considered as zone 1. *NOTE–ipLDK accepts 24 as 00, if input is 24 as starting value and vice versa. 10 – 13 means 10:00:00(AM) – 01:00:00(PM).* | + FLEX3 + **FLEX1** + VALUE2 (Time Zone 1) + **[HOLD/SAVE]** | VALUES –<br>FLEX1 = Time Zone1<br>FLEX2 = Time Zone2<br>FLEX3 = Time Zone3<br>Value2 = Time: HH-HH (4 Digits) |
| Time Zone 2 of Day Zone1 | Each time of day zone2 can use different LCR setting; each time of day zone1 can be grouped up to 3 zones. The time not belonging to any zone will be considered as zone 1. *NOTE–ipLDK accepts 24 as 00, if input is 24 as starting value and vice versa. 10 – 13 means 10:00:00(AM) – 01:00:00(PM).* | + FLEX3 + FLEX2 + VALUE (Time Zone 2) + **[HOLD/SAVE]** | VALUES –<br>FLEX1 = Time Zone1<br>FLEX2 = Time Zone2<br>FLEX3 = Time Zone3<br>Value2 = Time: HH-HH (4 Digits) |
| Time Zone 3 of Day Zone1 | Each time of day zone2 can use different LCR setting; each time of day zone1 can be grouped up to 3 zones. The time not belonging to any zone will be considered as zone 1. *NOTE–ipLDK accepts 24 as 00, if input is 24 as starting value and vice versa. 10 – 13 means 10:00:00(AM) – 01:00:00(PM).* | + FLEX3 + FLEX3 + VALUE (Time Zone 3) + **[HOLD/SAVE]** | VALUES –<br>FLEX1 = Time Zone1<br>FLEX2 = Time Zone2<br>FLEX3 = Time Zone3<br>Value2 = Time: HH-HH (4 Digits) |
| Time Zone 1 of Day Zone2 | | + FLEX4 (Day Zone 2) + FLEX1 + VALUE2 (Time Zone 1) + **[HOLD/SAVE]** | |
| Time Zone 2 of Day Zone2 | | + FLEX4 + FLEX2 + VALUE2 (Time Zone 2) + **[HOLD/SAVE]** | |
| Time Zone 3 of Day Zone2 | | + FLEX4 + FLEX3 + VALUE2 (Time Zone 3) + **[HOLD/SAVE]** | |
| Time Zone 1 of Day Zone3 | | + FLEX5 (Day Zone 3) + FLEX1 + VALUE2 (Time Zone 1) + **[HOLD/SAVE]** | |
| Time Zone 2 of Day Zone3 | | + FLEX5 + FLEX1 + VALUE2 (Time Zone 2) + **[HOLD/SAVE]** | |
| Time Zone 3 of Day Zone3 | | + FLEX5 + FLEX1 + VALUE2 (Time Zone 3) + **[HOLD/SAVE]** | |

## 3.8.2 LEADING DIGIT TABLE (PGM 221)

The Leading Digit Table (LDT) is used to check if digits dialed by the User are LCR Coded (ADMIN PGM221 – FLEX 2), the digits will be converted and a CO line will be secured according to DMT (ADMIN PGM 222).
In the ipLDK System, up to 250 LDT entries can be programmed. Each LDT entry has six sub-attributes, 'LCR type', 'LCR code', 'DMT index for day zone 1/2/3', and 'Check password'.

| FLEX | Item | Default | Remark(Value) |
|---|---|---|---|
| FLEX 1 | LCR Type | BOTH | BOTH = Look up this entry for both 'INT' and 'COL'<br>INT = Look up this entry for internal dialing.<br>COL = Look up this entry after dialing 3-way toggle. |
| FLEX 2 | LCR Code(Up to 12 digits) | None | To be compared with the dialed digits by a user. |
| FLEX 3 | DMT index for Day Zone 1 | None (6 digits) | Meaning of 6 digits: each pair(2 digits) is the index to the DMT for the each time Zone 1/2/3.(The [SPEED] button is used to validate the remaining index) |
| FLEX 4 | DMT index for DAY Zone 2 | | |
| FLEX 5 | DMT index for Day Zone 3 | | |

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **221.**
3. Enter the appropriate index (LDT Table, Range=000-249).
4. Follow the specific Procedure as listed in the Table.

| PGM 221 | Description | Procedure | COMMENTS |
|---|---|---|---|
| LCR Type | Used to select the LCR type. | + FLEX1 + VALUE (LCR Type) + **[HOLD/SAVE]** | VALUES –<br>1 = INT (look up this entry only for internal dialing)<br>2 = COL (look up this entry only after dialing CO Access Code)<br>3 = BOTH (look up this entry for both INT and COL) |
| LCR Code | If digits dialed by the User are equal to determined value, the digits will be converted and a CO line will be secured according to DMT (ADMIN PGM222). | + FLEX2 + VALUE (2 digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |
| DMT index (Day Zone 1) | Used to set the table index DMT (ADMIN PGM222) of the day zone 1. | + FLEX3 + VALUE (DMT Index, 6 digits, Range=00-99) + **[HOLD/SAVE]** | Because day zone 1 has 3 different available time zones, all three table indices of each time must be selected. |
| DMT Index (Day Zone 2) | Used to set the table index DMT (ADMIN PGM222) of the day zone 2. | + FLEX4 + VALUE (DMT Index, 6 digits, Range=00-99) + **[HOLD/SAVE]** | Because day zone 2 has 3 different available time zones, all three table indices of each time must be selected. |
| DMT Index (Day Zone 3) | Used to set the table index DMT (ADMIN PGM222) of the day zone 3. Because day zone 2 has 3 different available time zones, all three table indices of each time must be selected. | + FLEX5 + VALUE (DMT Index, 6 digits, Range=00-99) + **[HOLD/SAVE]** | Because day zone 3 has 3 different available time zones, all three table indices of each time must be selected. |
| Check Password | If this value is set to ON, the ipLDK System will request the User account code when dialed digits match the LCR code. | + FLEX6 + **1** (ON) + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

## 3.8.3 DIGIT MODIFCATION TABLE (PGM 222)

Digit Modification Table (DMT) is used to convert dialed digits and seize an outgoing CO line. In the ipLDK System, up to 100 DMT entries can be programmed. Each DMT entry has six sub-attributes, 'Added digit stream', 'Removal position', 'Remove Number', 'Add position', 'CO Line Group', and 'Alternative DMT index'.

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
1. Dial **222.**
1. Enter the appropriate index (DMT Table, Range=00-99).
1. Follow the specific Procedure as listed in the Table.

| PGM 222 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Added Digit Stream | This value is used to add digit stream for user dialed digits (refer to *Add Position* – PGM222, FLEX4). | **+** FLEX1 + VALUE (up to 20 digits, Range=0-9,*,#) + **[HOLD/SAVE]** | VALUES – **[CALLBK]** = Pause **[DND/FOR ]**= Dial tone detection instead of pause enter **[FLASH]** = Station Number Billing code |
| Removal Position | Used to set the removal position for user dialed digits. Some digits will be removed from the designated position up to this amount. | **+** FLEX2 + VALUE (2 digits, Range=01-12) + **[HOLD/SAVE]** | |
| Number of Removal | Used to set the number of removal digits. | + FLEX3 + VALUE (2 digits, Range=01-12) + **[HOLD/SAVE]** | |
| Add Position | Used to set the add position for user dialed digits. Some digits are added from the designated position with Add Digit Stream. | + FLEX4 + VALUE2 (2 digits, Range=01-13) + **[HOLD/SAVE]** | |
| CO Line Group | Used when LCR calls secure the outgoing CO line. The idle CO line within CO Line Group of the determined value is seized for LCR calls. | + FLEX5 + VALUE (2 digits, Refer to VALUES) + **[HOLD/SAVE]** | VALUES – ipLDK-20=01-08 ipLDK-100=01-24 ipLDK-300/300E=01-72 |
| Alternative DMT Index | Used when LCR calls are unable to seize an idle CO line within ADMIN PGM222 – FLEX 5, the LCR call will seize an idle CO within CO Line Group of this value DMT index. | + FLEX6 + VALUE (2 digits, Range=00-99) + **[HOLD/SAVE]** | |

## 3.8.4 LCR TABLE INITIALIZATION (PGM 223)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
1. Dial **223.**
1. Follow the specific Procedure as listed in the Table.

| PGM 223 | Description | Procedure | COMMENTS |
|---|---|---|---|
| DMT of Day Zone 1 | Changes the index of DMT value for day zone 1 of LDT to the new value. | **+** FLEX1 + VALUE (6 digits, Range=00-99) + **[HOLD/SAVE]** | Each pair (2 digits) is the index of the DMT for each Time Zone 1/2/3 |
| DMT of Day Zone 2 | Changes the index of DMT value for day zone 2 of LDT to the new value. | **+** FLEX2 + VALUE (6 digits, Range=00-99) + **[HOLD/SAVE]** | |
| DMT of Day Zone 3 | Changes the index of DMT value for day zone 3 of LDT to the new value. | **+** FLEX3 + VALUE (6 digits, Range=00-99) + **[HOLD/SAVE]** | |
| CO Line Group | Change all CO Line Group values of DMT entry to the new value. | **+** FLEX4 + VALUE (2 digits, Range=01-24) + **[HOLD/SAVE]** | ipLDK-20=01-08 ipLDK-100=01-24 ipLDK-300/300E=01-72 |
| Alternative DMT Index | Changes the all Alternative DMT Index values of DMT entry to the new value. | **+** FLEX5 + VALUE (2 digits, Range=00-99) + **[HOLD/SAVE]** | |
| Initialize All LCR | Initializes the all LCR ADMIN data to the default value. | + FLEX6 + **[HOLD/SAVE]** | |

# 3.9 Toll Table (PGM 224 – 226)

Toll tables are used to accessing certain toll free calls as well as not allowing certain calls for Stations assigned to a particular Station COS.

## 3.9.1 TOLL EXCEPTION TABLE (PGM 224)

The Allow/Deny Tables are organized into 2 sets of tables to support 2 different toll plans at one installed site. Each allow/deny table may contain up to 30 number strings. All bins of allow and deny tables have no entries by default. Each number string can contain up to 14 entries including any number 0-9, *, #, "Don't care."

The following rules should be remembered when setting up the Allow/Deny Tables:

- If the tables have no entries, no restriction is applied.
- If entries are made in the allow table and only there, then only those numbers are allowed.
- If entries are made in the deny table and only there, then only those numbers are denied.
- If there are entries in both tables, the allow table is searched at first and if number is found, it is allowed. If not found, the deny table is searched and if number is found, it is denied. If it is not found in either table, it is allowed.

| RULE | ENTRY | | CONDITIONS & RESULT | |
|---|---|---|---|---|
| | ALLOW | DENY | ALLOW TABLE | DENY TABLE |
| 1 | Not Exist | Not Exist | No Restriction | No Restriction |
| 2 | Exist | Not Exist | Found – allowed<br>Not found – denied | - |
| 3 | Not Exist | Exist | - | Found – denied<br>Not found – allowed |
| 4 | Exist | Exist | Found – allowed<br>Not found – check deny table | Found – denied<br>Not Found – allowed |

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
1. Dial **224.**
1. Follow the specific Procedure as listed in the Table.

| PGM 224 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Allow Table A | Used to check whether the dialed digits by COS 2 and COS 4 Station is matched with the allowed toll pass digits.<br>*NOTE–Allow table A is only used when the COS of dialed station is COS 2 or 4.* | + FLEX1 + VALUE (refer to Allow Table, Range=01-30) + *Allow Number* (Max 14 Digits; Range=0-9, #, *, Don't Care) + **[HOLD/SAVE]** | |
| Deny Table A | Used to check whether the dialed digits by COS 2 and COS 4 Station is matched with the denied toll pass digits.<br>*NOTE–Deny table A is only used when the COS of dialed station is COS 2 or 4.* | + FLEX2 + VALUE (refer to Deny Table, Range=01-30) + *Deny Number* (Max 14 Digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |
| Allow Table B | Used to check whether the dialed digits by COS 3 and COS 4 Station is matched with the allowed toll pass.<br>*NOTE–Allow table B is only used when the COS of dialed station is COS 3 or 4.* | + FLEX3 + VALUE (refer to Allow Table, Range=01-30) + *Allow Number* (Max 14 Digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |
| Deny Table B | Used to check whether the dialed digits by COS 3 and COS 4 Station is matched with the denied toll pass digits.<br>*NOTE–Deny table B is only used when the COS of dialed station is COS 3 or 4.* | + FLEX4 + VALUE (refer to Deny Table, Range=01-30) + *Deny Number* (Max 14 Digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |
| Allow Table C | Used to check whether the dialed digits by COS 8, 10, and 11 Station is matched with the allowed toll pass digits.<br>*NOTE–Allow table A is only used when the COS of dialed station is COS 8, 10, and 11.* | + FLEX5 + VALUE (refer to Allow Table, Range=01-50) + *Allow Number* (Max 14 Digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |

| PGM 224 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Deny Table C | Used to check whether the dialed digits by COS 8, 10, and 11Station is matched with the denied toll pass digits.<br>*NOTE–Deny table A is only used when the COS of dialed station is COS 8, 10, and 11.* | + FLEX6 + VALUE (refer to Deny Table, Range=01-50) + *Deny Number* (Max 14 Digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |
| Allow Table D | Used to check whether the dialed digits by COS 9, 10, and 11Station is matched with the allowed toll pass.<br>*NOTE–Allow table B is only used when the COS of dialed station is COS 9, 10, and 11.* | + FLEX7 + VALUE (refer to Allow Table, Range=01-50) + *Allow Number* (Max 14 Digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |
| Deny Table D | Used to check whether the dialed digits by COS 9, 10, and 11Station is matched with the denied toll pass digits.<br>*NOTE–Deny table B is only used when the COS of dialed station is COS 9, 10, and 11.* | + FLEX8 + VALUE (refer to Deny Table, Range=01-50) + *Deny Number* (Max 14 Digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |

## 3.9.2 CANNED TOLL TABLES (PGM 225)

In addition to the basic toll restrictions, stations within COS 5 or 6 are subject to dial restrictions based on the Canned Allow and Deny Tables. This program permits entries in the Canned Toll Tables. Both the Allow and Deny table have 20 bins up to 14 digits.

| VALID DATA | FUNCTION | LCD DISPLAY |
|---|---|---|
| 0 – 9, *, # | Number | as dialed |
| [DND/FWD] | Don't Care | 'D' |

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **224.**
3. Follow the specific Procedure as listed in the Table.

| PGM 224 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Allow Table | Used to check, whether the dialed digits by COS 5 and COS 6 station is matched with the allowed toll pass digits.<br>NOTE–Allow table of canned toll is only used when the COS of dialed station is COS 5 or 6. | + FLEX1 + VALUE (refer to Allow Table, Range=01-20) + *Allow Number* (Max 14 Digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |
| Deny Table | Used to check whether the dialed digits by COS 5 and COS 6 station is matched with the denied toll pass digits.<br>NOTE–Deny table of canned toll is only used when the COS of dialed station is COS 5 or 6. | + FLEX2 + VALUE (refer to Deny Table, Range=01-20) + *Deny Number* (Max 14 Digits; Range=0-9, #, *) + **[HOLD/SAVE]** | |

## 3.9.3 EMERGENCY SERVICE CALL (PGM 226)

The emergency code table is used for Emergency Call Service. All stations, regardless of COS, can dial the emergency codes in this table. In this program mode, the following items can be customized:

2. Press the **[TRANS/PGM]** button.
3. Dial **226.**
4. Follow the specific Procedure as listed in the Table.

| PGM 226 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Emergency Service Call | Maximum of 10 emergency codes can be programmed. | + *Bin Number* (Range=1-10) + VALUE2 (Max 14 digits; Range=0-9,#,* ) + **[HOLD/SAVE]** | |

# 3.10 Tables (PGM 227 – 237, 204, 205)

## 3.10.1 AUTHORIZATION CODE TABLE (PGM 227)

Authorization code table entries consist of each Station password and extra account codes. The table entry from 001 to the maximum capacity of Station numbers are saved along with the password of each Station. CO Line Groups can be marked to deny access until a matched authorization code is entered. In this case, a DND warning tone is provided when the CO Line Group access code is dialed.

There can be no duplicate entries. By default, Authorization Codes are not assigned at all

Authorization code length can be programmed as 5 digits or variable length (3-11digits). If a 5-digit authorization code usage is programmed, the authorization code works as 5 digits length in admin program or features.

Under the variable length mode, the authorization code is flexible from 3 digits to 11 digits (in MPB version 2.0 or below, authorization code is fixed as 5 digits)

| MODEL | Number of Authorization Codes |
|---|---|
| ipLDK-20 | 200 |
| ipLDK-100 | 500 |
| ipLDK-300 | 1000 |
| ipLDK-300E | 2000 |

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **227.**
3. Enter the appropriate *Bin number*.
4. Follow the specific Procedure as listed in the Table.

| PGM 227 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Authorization Code Table | If the dialed Authorization code is verified, a CO dial tone will be presented. Otherwise, an error tone will be heard and access to the group will be denied. Stations or ADMIN programming can enter authorization codes. The Administrator can see and change Station passwords—no duplicate entries. | +FLEX1 + *Authorization Code* (3-11 digits; Range=0-9) + **[HOLD/SAVE]** | VALUES – Default = Not Assigned<br><br>Authorization code can be programmed as 5 digits or flexible length (3-11 digits); refer to PGM161 – FLEX21 |
| Day COS of Authorization Code | Day COS of Stations can only be viewed only; COS for extra entries can also be assigned. | + FLEX2 + *Class of Service* (Range=1-11) + **[HOLD/SAVE]** | |
| Night COS of Authorization Code | Night COS of stations can only be viewed; Night COS for extra entries can also be assigned. | + FLEX3 + *Class of Service* (Range=1-11) + **[HOLD/SAVE]** | |

## 3.10.2 CUSTOM CALL ROUTING (PGM 228)

The caller can select the destination according to the options outlined in the VMIB announcement. In the ipLDK system, up to 70 VMIB announcements can be used, and 11 different destination types can be selected.

When CCR call is routed to each destination, and the destination is busy, error, or no answer case, call can be re-routed to re-route destination by each VMIB announcement.

Flex 11 is Busy destination, Flex 12 is Error destination, and Flex 13 is No answer destination.

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **228.**
3. Enter the appropriate *CCR Table Number* (Range=01-70).
4. Press **FLEX1 (Range=FLEX1-FLEX13).**
   1. Enter the appropriate *Destination Type* (Range=01-11).
   2. Follow the specific Procedure as listed in the Table.
5. Press FLEX11(or FLEX12 or FLEX13) for entering reroute destination.
   1.Choose FLEX1 ~ FLEX3(Range = FLEX1 ~ FLEX3)
   2.Enter the appropriate Destination value.

| PGM 228 | Description | Destination Type | COMMENTS |
|---|---|---|---|
| Busy Destination | If CCR destination is busy, then call can be routed to Busy Destination | F1 : Tone<br>F2 : ATD<br>F3 : Hunt Group | Tone is just disconnected.<br>ATD is Ring assigned destination<br>Hunt group is each Hunt group. |
| Error/Time Out Destination | If CCR destination is error or user did not enter any digit in proper time, then call can be routed to Error/Time Out Destination | F1 : Tone<br>F2 : ATD<br>F3 : Hunt Group | |
| No Answer Destination | If CCR destination is No answer, then call can be routed to No Answer Destination | F1 : Tone<br>F2 : ATD<br>F3 : Hunt Group | |

| PGM 228 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Station | If the CCR destination type is the Station, the call will ring at the designated Station. | + 01 + *Station Number* + **[HOLD/SAVE]** | |
| Hunt Group | If CCR destination type is the Hunt Group, the call will ring at the designated member Station in the group. | + 02 + *Hunt Group number* + **[HOLD/SAVE]** | |
| VMIB | If CCR destination type is the VMIB, the designated VMIB announcement will be played to the caller. | + 03 + VMIB Announcement Number + **[HOLD/SAVE]** | |
| VMIB Drop | If CCR destination type is the VMIB Drop, the designated VMIB announcement will be played to the caller and the call will be disconnected after the VMIB announcement. | + 04 + VMIB Announcement Number + **[HOLD/SAVE]** | |
| System Speed | If CCR destination type is the System Speed, the call is routed to the system speed telephone number. | + 05 + *System Speed Number* + **[HOLD/SAVE]** | ipLDK-20=2000-2499<br>ipLDK-100=2000-3999<br>ipLDK-300= 2000-4499<br>ipLDK-300E=2000-6999 |
| Internal Page | If CCR destination type is the Internal Page, the call can page to the designated internal page zones. | + 06 + *Internal Page Zone* (Range: 01-10) + **[HOLD/SAVE]** | |

| PGM 228 | Description | Procedure | COMMENTS |
|---|---|---|---|
| External Page | If CCR destination type is the External Page, the call can page to the designated external page zones. | + 07 + *External Page Zone* (Range: 1-3) + **[HOLD/SAVE]** | VALUES –<br>ipLDK-20=1<br>ipLDK-300/300E=1-3 |
| All Call Page | If CCR destination type is the All Call Page, the call can page to all page zones. | + 08 + VALUE4 (refer to VALUES, Range=1-3) + **[HOLD/SAVE]** | VALUES –<br>ipLDK-20<br>1 = INT All Page<br>2 = All Page<br><br>ipLDK-100/300/300E<br>1 = INT All Page<br>2 = EXT All Page<br>3 = All Page |
| Net Number | If CCR destination type is set to this value, the call will be routed to network. | + 09 + *Net Number* + **[HOLD/SAVE]** | |
| Conference Room | If CCR destination type is set o this value, the call will be routed to the Conference room. | + 10 + Conference Room Number (Range=1-9) + **[HOLD/SAVE]** | |
| Station Voice Mail Box | If the CCR destination type is the Station Voice Mail box, the call will be routed designated Station's Voice Mail box directly. | + 11 + *Station Number* + **[HOLD/SAVE]** | |

## 3.10.3 EXECUTIVE/SECRETARY TABLE (PGM 229)

When the executive designated station is in DND state, intercom and transfer calls will be automatically routed to the designated secretary station. By default, Executive/Secretary pairs are not assigned at all.

| MODEL | Number of Executive/Secretary Pairs |
|---|---|
| ipLDK-20 | 6 |
| ipLDK-100 | 12 |
| ipLDK-300/300E | 36 |

In this program mode, the following items can be customized:

6. Press the **[TRANS/PGM]** button.
7. Dial **229.**
8. Follow the specific Procedure as listed in the Table.

| PGM 229 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Executive/Secretary Pairs | When the Executive designated station is in DND state, intercom and transfer calls will be automatically routed to the designated Secretary Station. | FLEX1 + Bin number + *Executive STA* + *Secretary STA* + **[HOLD/SAVE]** | VALUES –<br>Default = Not Assigned |
| CO Call to Secretary | If this feature is set to ON, every incoming CO call to Exec is automatically routed to Sec even when Exec is not in DND state. | + Bin number + Value + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Call Executive if Secretary DND | In some locations (Korea, India, Israel, Turkey), every ICM call to the Executive Station is routed to the Secretary regardless of the Executive state. However, if this feature is set to ON, each call to Exec is not routed to Sec if the Sec is in DND state. | FLEX3 + Bin number + Value + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Executive Grade | In some locations (Korea, India, Israel, Turkey), every ICM call to the Executive Station is routed to the Secretary regardless of the Executive state (only ICM calls from other Executives of the same or higher level can directly call the Executive). | FLEX4 + Bin number + *Value* (Range=1-12) + **[HOLD/SAVE]** | VALUES –<br>Default = 1<br>1 = Highest level<br>12 = Lowest level |

## 3.10.4 FLEXIBLE DID TABLE (PGM 231)

In the ipLDK system, a maximum of 1000 Flexible DID Table entries can be programmed. Each Flexible DID Table entry has five attributes. In this program mode, the following items can be customized:

9. Press the **[TRANS/PGM]** button.
10. Dial **231.**
11. Press **FLEX1** (Enter the appropriate VALUE, FLEX1=Input, FLEX2=Initialize, FLEX3=Delete).
12. Enter the DID Conversation Table number (Range=000-999).
13. Follow the specific Procedure as listed in the Table.

| PGM 231 | Description | Procedure | COMMENTS |
|---|---|---|---|
| DID Name | Used to save the name of incoming DID calls, and display incoming DID call information at the Station LCD. | + FLEX1 + *DID Conversation Table* (Range=000-999) + FLEX1 + Name (Up to 11 Characters, refer to Keyset Map) + **[HOLD/SAVE]** | |

**KEYSET MAP**

| | | |
|---|---|---|
| . – 13<br>Q – 11<br>Z – 12<br>1 – 10 | A – 21<br>B – 22<br>C – 23<br>2 – 20 | D – 31<br>E – 32<br>F – 33<br>3 – 30 |
| G – 41<br>H – 42<br>I – 43<br>4 – 40 | J – 51<br>K – 52<br>L – 53<br>5 – 50 | M – 61<br>N – 62<br>O – 63<br>6 – 60 |
| P – 71<br>Q – 72<br>R – 73<br>S – 74<br>7 – 70 | T – 81<br>U – 82<br>V – 83<br>8 – 80 | W – 91<br>X – 92<br>Y – 93<br>Z – 94<br>9 – 90 |
| ∗1–Blank<br>∗2 - :<br>∗3 - , | 0 – 00 | |

In this program mode, the following items can be customized:

14. Press the **[TRANS/PGM]** button.
15. Dial **231.**
16. Press **FLEX1.**
17. Enter the appropriate VALUE (FLEX1 = Input, FLEX2=Initial, FLEX3=Delete).
18. Enter the DID Conversation Table number (Range=000-999).
19. Follow the specific Procedure as listed in the Table.

| PGM 231 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Day Destination | Used to set the destination, when routing DID calls during the day ring mode. | + FLEX2 + *Destination Type* (Range=01-11, refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>Destination Type<br>1 = STA #<br>2 = Hunt #<br>3 = VMIB 00-70 (00, Not Assigned)<br>4 = VMIB 00-70 Drop (00, Not Assigned)<br>5 = SPD<br>ipLDK-20=2000-2499<br>ipLDK-100=2000-3499 |
| Night Destination | Used to set the destination, when routing DID calls during the night ring mode. | + FLEX3 + *Destination Type* (Range=01-11, refer to VALUES in Day Destination) + **[HOLD/SAVE]** | |
| Weekend Destination | Used to set the destination, when routing DID calls during the weekend ring mode. | + FLEX4 + *Destination Type* (Range=01-11, refer to VALUES in Day Destination) + **[HOLD/SAVE]** | |

| PGM 231 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Lunch Destination | Used to set the destination, when routing DID calls during the weekend ring mode. | + FLEX5 + *Destination Type* (Range=01-11, refer to VALUES in Day Destination) + **[HOLD/SAVE]** | ipLDK-300=2000-4999<br>ipLDK-300E=2000-6999<br>6 = Internal Page (01-10)<br>7 = External Page<br>8 = All Page (1-2, INT/ALL)<br>9 = Net Number (Network Station number)<br>10=Conference Room(1-9)<br>11=Station Voice Mail Box (STA#) |
| Reroute Destination | Used to set the second destination, when the routed DID call destination is busy. | + FLEX6 + *Destination Type* (Range=1-7, refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>1 = STA #<br>2 = Hunt #<br>3 = VMIB 00-70 (00, Not Assigned)<br>4 = VMIB 00-70 Drop (00, Not Assigned)<br>5 = SPD<br>2000-2499 (ipLDK-20)<br>2000-3499 (ipLDK-100)<br>2000-4999 (ipLDK-300)<br>2000-6999 (ipLDK-300E)<br>6 = Net Number (Network Station number)<br>7 = Station Voice Mail Box (STA #) |

## 3.10.5 SYSTEM SPEED ZONE (PGM 232)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **232.**
3. Enter the appropriate *Speed Zone number* (Range=01-10).
4. Follow the specific Procedure as listed in the Table.

| PGM 232 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Speed Bin Range in Zone | The system speed zone can be grouped into up to 10 System speed zones.<br>About each system speed zone, the accessibility can be set: ADMIN PGM232 – FLEX 2.<br>The toll check of each system speed zone can be set: ADMIN PGM232 – FLEX 4.<br>And the account code to access each system speed zone can be set: ADMIN PGM232 – FLEX 5.<br><br>The system speed bin section between 2000 and 2199 is defined as the toll free zone; the System speed dial numbers within this zone are not checked by the toll table. | + FLEX1 + VALUE (Speed bin range for Zone) + **[HOLD/SAVE]** | VALUES –<br>2200-2499 (ipLDK-20)<br>2200-3499 (ipLDK-100)<br>2200-4999 (ipLDK-300)<br>2200-6999 (ipLDK-300E) |
| Station Range to Access Zone | The accessibility of the system speed zones can be assigned to each station.<br>NOTE–When there are too many Stations to see, you can scroll data using the volume up/down keys. | + FLEX2 + VALUE(Station Number Range) + **[HOLD/SAVE]** | VALUES –<br>10-37 (ipLDK-20)<br>100-227 (ipLDK-100)<br>100-399 (ipLDK-300)<br>1000-1599 (ipLDK-300E) |
| Toll Checking | If this value is set to ON, the speed dial of this zone is checked by the toll table. | + FLEX3 + VALUE( ON/OFF) + **[HOLD/SAVE]** | VALUES-<br>0 =OFF<br>1 = ON |
| Authorization Check | If this value is set, the Station User must enter the value to use the speed dial of each System Speed Zone. | + FLEX4 + VALUE (ON/OFF) + **[HOLD/SAVE]** | VALUES –<br>1 = ON / 0 = OFF<br>Default = OFF |

## 3.10.6 WEEKLY TIME TABLE (PGM 233)

The Weekly Time Table can manage ring mode changes automatically.

The use of WEEKLY TIME TABLE is executed by the system attendant and each intercom tenancy group attendant. The first table is for the system attendant, and the others are for the intercom tenancy group attendant.

The table is consisted of 7 days: Monday/Tuesday/Wednesday/Thursday/Friday/Saturday/Sunday. On each day, the time zone of DAY/NIGHT/WEEKEND mode can be programmed. For example, the office work week starts at 9:00(AM) and finishes at 5:00(PM) during each weekday. And the weekend starts at 5:00(PM) from Friday to Sunday. In this case, the WEEKLY TIME TABLE can be set as shown:

**SAMPLE WEEKLY TIME TABLE**

| | | | |
|---|---|---|---|
| WEEKLY TBL: MON<br>D:09:00 N:17:00 W: | WEEKLY TBL: TUE<br>D:09:00 N:17:00 W: | WEEKLY TBL: WED<br>D:09:00 N:17:00 W: | WEEKLY TBL: THU<br>D:09:00 N:17:00 W: |
| WEEKLY TBL: FRI<br>D:09:00 N: W:17:00 | WEEKLY TBL: SAT<br>D: N: W:00:00 | WEEKLY TBL: SUN<br>D: N: W:00:00 | |

| FLEX | ITEM | REMARK |
|---|---|---|
| 1 | Monday | Refer to Table in Section 2.13.8 of the **Feature Description and Operation manual**. |
| 2 | Tuesday | |
| 3 | Wednesday | |
| 4 | Thursday | |
| 5 | Friday | |
| 6 | Saturday | |
| 7 | Sunday | |

| FLEX | ITEM | DEFAULT | REMARK |
|---|---|---|---|
| 1 | Day Start Time | | Day ring mode start time (HH:MM) |
| 2 | Night Start Time | | Night ring mode start time (HH:MM) |
| 3 | Weekend Start Time | | Weekend ring mode start time (HH:MM) |
| 4 | Lunch Start Time | | Lunch ring mode start time (HH: MM) |
| 5 | Lunch End Time | | Lunch ring mode end time (HH: MM) |

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **233.**
3. Follow the specific Procedure as listed in the Table.

| PGM 233 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Weekly Time Table | Use of the Weekly Time Table is executed by the System Attendant and each intercom tenancy Group Attendant. System Attendant follows table 0.<br><br>Time zone of DAY/NIGHT/WEEKEND /Lunch Start/Lunch End for 7 days is programmed. | + VALUE1 (table bin) + VALUE2 (*Day Mode*, Range = FLEX1 – FLEX7) + VALUE3(*Day, Night, Weekend Mode,* Range=FLEX1-FLEX3) + VALUE4 *(Start Time* , HH/MM) + **[HOLD/SAVE]** | VALUES –<br>VALUE1<br>0-5(ipLDK-20/100)<br>00-15(ipLDK-300/300E)<br><br>VALUE2<br>Flex1 = Monday-Flex7 = Sunday<br><br>VALUE3<br>Flex1 = Day<br>Flex2 = Night<br>Flex3 = Weekend<br>Flex4 = Lunch Start<br>Flex5 = Lunch End<br><br>VALUE4 –<br>4 digits Start Time |

## 3.10.7 VOICE MAIL DIALING TABLE (PGM 234)

The Voice Mail Dialing Table defines the interface for dialing between the ipLDK and the external VM device. In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **234.**
3. Follow the specific Procedure as listed in the Table.

| PGM 234 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Voice Mail Dialing Table | | + VALUE1 (Range=1-9 refer to Voice Mail Default Table) + VALUE2 (Range=1-2, refer to VALUES) + *Prefix/Suffix Code* (Up to 12 digits) + **[HOLD/SAVE]** | VALUES – VALUE1 1-9 (Voice mail table) VALUE2 1 = PREFIX 2 = SUFFIX |

**Voice Mail Default Table**

| DIGIT | ITEM | VALUE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | VM Table 1 | | Prefix: P# Suffix: - | Put Mail |
| 2 | VM Table 2 | | Prefix: P## Suffix: - | Get Mail |
| 3 | VM Table 3 | | Prefix: P#*3P Suffix: - | Busy Table |
| 4 | VM Table 4 | | Prefix: P#*4P Suffix: - | No Answer Table |
| 5 | VM Table 5 | | Prefix: P#*5P Suffix: - | Error Table |
| 6 | VM Table 6 | | Prefix: P#*6P Suffix: - | DND Table |
| 7 | VM Table 7 | | Prefix: Suffix: - | |
| 8 | VM Table 8 | | Prefix: Suffix: - | |
| 9 | VM Table 9 | | ***** | Disconnect Table |

## 3.10.8 MOBILE EXTENSION (PGM 236)

A mobile user is able to use the phone as extension of the system. So he can receive the incoming call and make the outgoing call when a user registers the mobile phone number. In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **236.**
3. Enter bin number which matches with station physical number.
4. Follow the specific Procedure as listed in the Table.

| PGM 236 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Activate Mobile Extension | If this feature is set to ON, the Station can use the Mobile Extension features. | + FLEX1 + **1** (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Assign CO Group | Used to assign the CO group when a call routes to a mobile extension. | + FLEX2 + *CO Group* + **[HOLD/SAVE]** | |
| Assign Telephone Number | Used to enter the telephone number of a mobile extension when this feature is activated. | + FLEX3 + *Mobile Number* (Up to 24 digits) + **[HOLD/SAVE]** | |
| Assign CLI Number | Used to enter the CLI number of a mobile extension. | + FLEX4 + *CLI number* (up to 16 digits) + **[HOLD/SAVE]** | |
| Mobile Extension Hunt Call | If this feature is set to ON and a station is a member of Hunt group, then the Hunt call is routed to the Mobile extension also. | + FLEX5 + **1** (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Voice Message Notification to Mobile | If this feature is set to ON and if a voice message was left at the station, the system will send SMS notification to the Mobile Extension. (Only possible when PSTN SMS is served). | + FLEX6 + **1** (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Mobile Extension Usage | If this value is set to ON, it means mobile extension being used. Same as Station PGM+34 | + FLEX7 + **1** (ON) + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |

## 3.10.9 LOCAL CODE TABLE (PGM 204)

The local call is defined as one that satisfies the ADMIN PGM204. If the incoming telephone numbers matches this table, the SMDR is printed as a local call. Up to 16 SMDR local codes are available. The SMDR long distance code can be up to 5 digits. By default, SMDR long distance code is none.

In this program mode, the following item can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **204.**
3. Enter bin number (01-16).
4. Enter local code (Max 5 digits).

## 3.10.10 ENBLOCK PREFIX TABLE (PGM 205)

"Dialing service by prefix code" is defined one of ISDN CO line service.

In IP LDK system, it has 6 prefix table and maximum 50 entry per prefix table can be programmed.
Each Prefix table entry has 'Prefix code', 'Minimum digit', 'Maximum digit', 'Sending Complete', 'Number of type' and 'Numbering plan'.

In this program mode, the following item can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **205.**
3. Select Table number (Flex 1 ~ Flex 6).
4. Enter bin number (01-50).
5. Follow the specific Procedure as listed in the Table.

| PGM 205 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Prefix code | According to prefix code, called party number is defined.<br>DND button is used as Mask Digit | + FLEX1 + *Prefix code* (Up to 8digits, DIGITS + **[HOLD/SAVE]** | DIGITS –<br>0 ~ 9<br>D : Mask Digit (DND/FWD Button) |
| Min Digits | Min dial digit no. | + FLEX2 + *Min dial number* (2digits, Range=00-30) + **[HOLD/SAVE]** | |
| Max Digits | Max dial digit no | + FLEX3 + *Max dial number* (2digits, Range=00-30) + **[HOLD/SAVE]** | |
| Sending Complete | Overlap sending or Sending Complete | + FLEX4 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Number of Type | Type of called number | + FLEX5 + VALUE + **[HOLD/SAVE]** | VALUES –<br>(0~6)<br>Unknown/International/National/Network Spec/Subscriber/Abbreviated/Reserved |
| Numbering Plan | Numbering plan identification of called number | + FLEX6 + VALUE + **[HOLD/SAVE]** | VALUES –<br>(0~6)<br>Unknown/ISDN/Data Numbering/Telex/National Standard/Private/Reserved |

## 3.10.11 Incoming CLI Destination Table (PGM 237)

DID incoming CO call destination can be assigned by incoming CLI. If some CLI number is registered at Incoming CLI Destination Table, all of DID call with these CLI will be routed to registered specific places. ICLID Table (Incoming CLI Destination Table) has two fields, one is CLID field, and the other is Destination Index field. Destination Index field is represent index number of DID Conv Table (PGM 231)

| PGM 237 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Incoming CLI Number | Registered Field for Incoming CLI. | Bin number (001~100) + FLEX1 + **CLI Number (upto 20 digit)** + **[HOLD/SAVE]** | |
| Conversion Table Index | This value is Conversion table index number (PGM231). | Bin number (001~100) + FLEX2 + *Index(DID Conversion Table Index)* + **[HOLD/SAVE]** | |

# 3.11 Networking (PGM 320 – 324)

## 3.11.1 NETWORKING BASIC ATTRIBUTES (PGM 320)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **320.**
3. Follow the specific Procedure as listed in the Table.

| PGM 320 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Networking Enable | This ADMIN program value is used to enable the networking feature.<br>To set this ADMIN value to ON, the networking software lock-key must be installed when a Station user enters the software lock-key check dialing command ([TRANS/PGM] + 78). | + FLEX1 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Networking Retry Count | This ADMIN value is used to retry the connection when a System error is detected during network connection signaling. This value is only used when the networking feature is executed through the public switching network. This value is not used at the networking feature between direct connected ipLDK systems. | + FLEX2 + *Retry Count number* (2digits, Range=00-99) + **[HOLD/SAVE]** | |
| Networking CNIP Enable | The name of calling station is sent to the called system between ipLDK systems. CNIP is displayed on the called party station LCD according to ADMIN programming. If the CNIP and CLI are received together, CNIP is prior to CLI. | + FLEX3 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Networking CONP Enable | The name of answered station is sent to the calling system between ipLDK systems. CONP is displayed on the calling party station LCD according to ADMIN programming. | + FLEX4 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Networking Signal Method | Select the information element type for networking supplementary service message. FACILITY/USER-TO-USER information element can be used for networking supplementary service message. | + FLEX5 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = UUS<br>1 = FAC |
| Networking CAS Enable | Enable Centralized attendant in master system, CAS should be disabled. | + FLEX6 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Networking VPN Enable | Reserved | + FLEX7 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Networking CC Retain Mode | This value is used to set the networking supplementary signaling type of the call completion. If this value is set to ON, the signaling of call completion retain mode is executed. | + FLEX8 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

## 3.11.2 NETWORKING SUPPLEMENTARY ATTRIBUTES (PGM 321)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
1. Dial **321.**
1. Follow the specific Procedure as listed in the Table.

| PGM 321 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Networking Transfer Mode | Used to select the signaling type for networking transfer mode. | + FLEX1 + VALUE (refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>0 = JOIN<br>1 = REROUTE |
| TCP Port | Used to set the TCP port for BLF messaging. | + FLEX2 + VALUE (4 digits, Range=0000-9999) + **[HOLD/SAVE]** | VALUES –<br>Default = 9000 |
| UDP Port | Used to set the UDP port for BLF messaging. | + FLEX3 + VALUE (4 digits, Range=0000-9999) + **[HOLD/SAVE]** | VALUES –<br>Default = 9001 |
| BLF Manager IP Address | Used to set the IP Address for the BLF manager. | + FLEX4 + *BLF Manager IP Address* (12 digits) + **[HOLD/SAVE]** | |
| Duration of BLF status | Used to set the duration of BLF status messaging. | + FLEX5 + *Seconds* (2 digits, Range=01-20) + **[HOLD/SAVE]** | |
| Multicast IP Address | Used to set the multicast IP address for BLF service. | + FLEX6 + *Multicast IP Address* (12 digits) + **[HOLD/SAVE]** | |
| Net Trans Fault Recall Timer | Used to designate the amount of time for the Network Transfer Fault Recall timer. | + FLEX7 + *Seconds* (3 digits, Range=001-300) + **[HOLD/SAVE]** | |
| Gatekeeper Reroute CO Group | Used to set the CO group of gatekeeper | + FLEX8 + VALUE*(Co Grp Range)* + **[HOLD/SAVE]** | VALUES –<br>00–72 (ipLDK-300/300E)<br>00–24 (ipLDK-100)<br>00-08 (ipLDK-20) |

## 3.11.3 NETWORKING CO LINE ATTRIBUTES (PGM 322)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **322.**
3. Enter the CO Line Range.
4. Follow the specific Procedure as listed in the Table.

| PGM 322 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Networking CO Line Group | Used to select the CO Line Group for networking calls. | + FLEX1 + *Net CO Line Group* (Range=00-24) + **[HOLD/SAVE]** | |
| VOIB Mode | This ADMIN program determines if H.323 or SIP is used at each VOIP CO line. | + FLEX2 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = H.323<br>1 = SIP |
| Use Gatekeeper | Check the usage of gatekeeper. | + FLEX3 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = ON<br>1 = OFF |
| Networking CO Line Type | Used to select the type of system that is connected through the networking CO line. | + FLEX4 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = PSTN<br>1 = NET |
| DTMF Mode | This ADMIN program determines DTMF Mode at each VOIP CO line. | + FLEX5 + VALUE + **[HOLD/SAVE]** | VALUES –<br>2 = INBAND DTMF<br>3 = RFC2833 DTMF<br>4 = OUTBAND DTMF |

## 3.11.4 NETWORKING ROUTING TABLE (PGM 324)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **324.**
3. Dial Net Numbering Plan Table index (00-71).
4. Follow the specific Procedure as listed in the Table.

| PGM 324 | Description | Procedure | COMMENTS |
|---|---|---|---|
| System Usage | Used to set the networking connection type of the selected table entries. | + FLEX1 + VALUE2 + **[HOLD/SAVE]** | VALUES –<br>0 = NET<br>1 = PSTN |
| Net Numbering Code | Used to set the networking number code of the selected table entries. | + FLEX2 + *Numbering Plan Code* (Max. 16 digits, refer to VALUES) + **[HOLD/SAVE]** | VALUES –<br>0-9 = digits 0-9 can be entered.<br># = follows digits to signify an internal station number. |
| Net Number CO Line Group | Used to select the CO line group for routing networking calls. | + FLEX3 + *Net CO Line Group* (Range=00-24) + **[HOLD/SAVE]** | |
| CPN or IP Information | CPN information for ISDN, IP address for VOIP (CPN info 1-CPN info 4). | + **FLEX4** + **FLEX1** (refer to VALUE) + *IP Address* (12Digits) + **[HOLD/SAVE]** | VALUE –<br>If NET CO Group of PGM324-FLEX3 is VOIP,<br>FLEX 1 = 1ST CPN INFORMATION<br>FLEX 2 = 2ND CPN INFO<br>FLEX 3 = 3RD CPN INFO<br>FLEX 4 = 4TH CPN INFO<br><br>If NET CO Group of PGM324-FLEX3 is ISDN, CPN info without pressing FLEX key. |
| Alternate Dial Bin | Alternate number used when the networking path experiences fatal problems. | + FLEX5 + *Speed Bin Number* (Range=2000-2499) + **[HOLD/SAVE]** | |
| Destination MPB IP | Designates the IP Address of the system used to support DECT mobility service. | + FLEX6 + *IP Address* (12 digits) + **[HOLD/SAVE]** | |
| Digit Repeat | When the value is set to YES, the PSTN is not connected with the PSTN line directly but connected by another networking system. | + FLEX7 + VALUE2 + **[HOLD/SAVE]** | VALUES –<br>0 = NO<br>1 = YES |
| CO ATD Code CLI | Used to determine the CLI number sent to PX. | + FLEX8 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = NO<br>1 = YES |
| Firewall Routing | This ADMIN program determines that this table is local network or different network. | + FLEX9 + VALUE2 + **[HOLD/SAVE]** | VALUES –<br>0 = NO<br>1 = YES |
| AUTHO Code COS Use | When the value is set to YES, COS of Transit-out call will be determined by password of Autho-Code Table COS. | + FLEX10 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = NO<br>1 = YES |
| SMDR DIAL HIDDEN | When the value is set to YES Transit-Out Code and Dialed Number in SDMR data will not be printed at slave system. | + FLEX11 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = NO<br>1 = YES |

# 3.12 VOIB (PGM 340 – 501)

## 3.12.1 VOIP IP SETTING (PGM 340)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **340.**
3. Follow the specific Procedure as listed in the Table.

| PGM 340 | Description | Procedure | COMMENTS |
|---|---|---|---|
| IP Address | This ADMIN program is used for setting the IP address of VOIP board. | + FLEX1 + IP Address (12 digits) + **[HOLD/SAVE]** | VALUES –<br>Skip=# |
| Gateway Address | This ADMIN program is used for setting the gateway address of VOIP board. | + FLEX2 + IP Address (12 digits) + **[HOLD/SAVE]** | Skip=# |
| SUBNET Mask | This ADMIN program is used for setting the subnet mask of VOIP board. | + FLEX3 + Subnet Mask (12 digits) + **[HOLD/SAVE]** | VALUES –<br>Skip=#<br>Default = 255.255.255.0 |
| DNS Address | This ADMIN program is used for setting the DNS address of VOIP board. | + FLEX4 + DNS Address (12 digits) + **[HOLD/SAVE]** | Skip=# |
| Trace Password | This ADMIN program is used for setting the password which needs to contact to VOIP board for trace. | + FLEX5 + VALUE (10 Characters, refer to Keyset Map) + **[HOLD/SAVE]** | |

**KEYSET MAP**

| | | |
|---|---|---|
| . – 13<br>Q – 11<br>Z – 12<br>1 – 10 | A – 21<br>B – 22<br>C – 23<br>2 – 20 | D – 31<br>E – 32<br>F – 33<br>3 – 30 |
| G – 41<br>H – 42<br>I – 43<br>4 – 40 | J – 51<br>K – 52<br>L – 53<br>5 – 50 | M – 61<br>N – 62<br>O – 63<br>6 – 60 |
| P – 71<br>Q – 72<br>R – 73<br>S – 74<br>7 – 70 | T – 81<br>U – 82<br>V – 83<br>8 – 80 | W – 91<br>X – 92<br>Y – 93<br>Z – 94<br>9 – 90 |
| ✳1–Blank<br>✳2 - :<br>✳3 - , | 0 – 00 | |

| PGM 340 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Default Codec | Used to set the default codec for the VOIP board. | + FLEX6 + VALUE + **[HOLD/SAVE]** | VALUES –<br>Default = 0(G.723.1)<br>0 = G.723.1<br>1 = G.729<br>2 = G.711_ALAW<br>3 = G.711_ULAW<br>4 = G.729A |
| Default Gain | Used to set the default gain of the VOIP board. | + FLEX7 + VALUE (Range=1-62) + **[HOLD/SAVE]** | |

| PGM 340 | Description | Procedure | COMMENTS |
|---|---|---|---|
| No Delay (TOS) | Used to designate if the VOIP board will have a delay. | + FLEX8 + VALUE + [HOLD/SAVE] | VALUES –<br>0 = OFF<br>1 = ON |
| Throughput (TOS) | Used to set VOIP board throughput. | + FLEX9 + VALUE + [HOLD/SAVE] | VALUES –<br>0 = NORMAL<br>1 = HIGH |
| Reliability (TOS) | Used to set VOIP board reliability. | + FLEX10 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = NORMAL<br>1 = HIGH |
| Firewall IP Address | Used to set the NAT Firewall IP address of VOIP board. | + FLEX11 + VALUE + **[HOLD/SAVE]** | VALUES –<br>12 Digits (Firewall IP address) |
| VOIB mode | This ADMIN program is used for selecting whether the mode of VOIP board is H.323, SIP or DUAL.<br>If it is set to DUAL, selected VOIP board serves both H.323 and SIP automatically. | + FLEX12 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = H.323<br>1 = SIP<br>2 = DUAL |
| Silence Detection | Used to select the Silence Detection of VOIP board. If this value is set to ON, VOIB will not send data during periods of silence. | + FLEX13 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| Echo Canceller | If this value is set to ON, the Echo on the line will be detected and cancelled out. | + FLEX14 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| DTMF Mode | Used to set the DTMF mode of VOIP board. | + FLEX15 + VALUE + **[HOLD/SAVE]** | VALUES –<br>2 = Inband DTMF<br>3 = RFC2833 DTMF<br>4 = Outband DTMF; (1) SIP, (2) H.232 |
| Jitter Buffer | Used to set the Jitter buffer of VOIP board, so very little sound distortion is apparent. | + FLEX16 + VALUE + **[HOLD/SAVE]** | VALUES –<br>050-300 |
| Voice Monitor | When this value is set to ON, the System will monitor voice.<br>**Not Used** | + FLEX17 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| H.323 (Fast) Mode | This ADMIN program selects H.323 Mode. | + FLEX18 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = NORMAL<br>1 = FAST |
| Early H.245 | This ADMIN program determines if Early H.245 Mode will be used. | + FLEX19 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| H.245 Tunneling | This ADMIN program determines if H.245 Tunneling will be used. | + FLEX20 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| TOS Precedence | This ADMIN program sets TOS Precedence. | + FLEX21 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0-2 = 3-bit precedence<br>3 = 1-bit Delay<br>4 = 1-bit Throughput<br>5 = 1-bit Reliability<br>6-7 = Not Used |
| FAX MODE | This ADMIN program sets FAX Mode. | + FLEX22 + VALUE + **[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |

## 3.12.2 Gatekeeper Setting (PGM 341)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **341.**
3. Follow the specific Procedure as listed in the Table.

| PGM 341 | Description | Procedure | COMMENTS |
|---|---|---|---|
| GK Usage | Used to determine if Gatekeeper will be used.<br>**Not Used** | + FLEX1 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| GK Call Mode | Used to set the Call Mode. | + FLEX2 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>0 = DIRECT<br>1 = GK Reroute |
| GK Open H245 | Determines if the H245 port will be opened. | + FLEX3 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| GK H245 Tunneling | Designates if H245 Tunneling will be used. | + FLEX4 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| GK Pre-granted ARQ | Determines if the endpoint device will attempt to initiate a call. | + FLEX5 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| GK Out of Band Flash | Will notify (using Flash) if Gatekeeper is Out of Band.<br>**Not Used** | + FLEX6 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>0 = OFF<br>1 = ON |
| GK Time to Live | Used to set the interval of RRQ message | + FLEX7 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>3 Digits (0-250) |
| GK Address | Used to set the Gatekeeper IP address to register. | + FLEX8 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>12Digits (IP Address) |
| GK Find Address | Gatekeeper will locate the included address.<br>**Not Used** | + FLEX9 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>12Digits (IP Address) |
| GK Find Port | Designates the Port used by Gatekeeper. | + FLEX10 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>4 Digits (Port Number) |
| GK RAS Signal Port | Used to set the Gatekeeper Registration, Admission, and Status (RAS) signal port. | + FLEX11 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>4 Digits (Port Number) |
| GK Signal Port | Used to set the Gatekeeper call signal port. | + FLEX12 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>4 Digits (Port Number) |
| VOIB GK ID | Used to set a Unique Gatekeeper ID. | + FLEX13 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>Up to 23 characters |
| VOIB ID | Used to set a Unique VOIB ID. | + FLEX14 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>Up to 23 characters |
| VOIB E164 Address | Used to set the Station number. | + FLEX15 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>Up to 23 characters |
| VOIB Terminal Alias | RESERVED | + FLEX16 + VALUE +<br>**[HOLD/SAVE]** | VALUES –<br>20 Digits |

## 3.12.3 SIP Attribute 1 (PGM 500)

The SIP Attribute 1 Program is used to set the Proxy Server, DNS and other items for each VOIB (only available in PC-Admin).

| PGM500 | Description | COMMENTS |
|---|---|---|
| Proxy Server Address | SIP proxy is the element that routes SIP requests to User Agent servers and SIP responses to User Agent clients. | Max 32 digits character string (ex., abcd@efg) |
| Proxy Server Port | SIP proxy port number. | 0000-9999 |
| Proxy Registration Timer | SIP proxy server registration timer; when the ipLDK sends a register request, it may suggest an expiration interval that indicates how long the client would like the registration to be valid. | 0-65535 (sec) |
| Use Outbound Proxy | Usage of SIP outbound proxy. | OFF/ON |
| Primary DNS Address | IP address of primary DNS to find SIP proxy. | Max 32 digits character string of IP address (e.g. xxx.xxx.xxx.xxx) |
| Secondary DNS Address | IP address of secondary DNS to find SIP proxy. | Max 32 digits character string of IP address (e.g. xxx.xxx.xxx.xxx) |
| Domain | SIP user domain name; when a user makes a SIP outgoing call, this domain name is added to the dialed digits. (ex., <dialed digit> @domain.name.com). | Max 32 digits character string (e.g. domain.name.com) |
| Connection Mode | This Admin is used to transport SIP protocol. | TCP/UDP |
| 100Rel Support | If this feature is set to ON, the System will support 100Rel, which is used to acknowledge receipt of reliably transported provisional responses (1xx). | OFF/ON |
| Use R-port Method | If this feature is set to ON, R-port is supported, which is used for NAT traversal problems. | OFF/ON |
| Use Single Code Only | If this feature is set to ON, only single codec is supported. | OFF/ON |
| Remote Part ID | The Remote-Party-ID header field provides information about the remote party. Different types of party information can be provided, e.g. calling and called, and for each, different types of identity information can be provided as well. A request or response MAY contain more than one Remote-Party-ID header field, with privacy requested independently for each. This Admin is used to support 'Remote Part ID' for CID. | OFF/ON |
| 181 Message | If this feature is set to ON, 181 message is supported (call is being forwarded to a different set of destinations). | OFF/ON |
| IP Centrex | If this feature is set to ON, IP Centrex service is supported, which is only used on Broadsoft servers. | OFF/ON |
| SIP Name Service | If this feature is set to ON, SIP Name Service is supported. | OFF/ON |
| Asserted-ID | This field uses private extensions to the SIP that enable a network of trusted SIP servers to assert the identify of authenticated users, and the application of existing privacy mechanisms to the identify problem. The use of these extensions is only applicable inside an administrative domain with previously | OFF/ON |

| PGM500 | Description | COMMENTS |
|---|---|---|
| | agreed-upon policies for generation, transport and usage of such information. If this feature is set to ON, Asserted-ID service is supported. | |
| Privacy | The presence of this privacy type in a Privacy header field indicates that the user would like the Network Asserted Identify to be kept private with respect to the SIP entities outside the Trust Domain with which the user authenticated. If this feature is set to ON, Privacy service is supported. | OFF/ON |
| Use Extension Number | This field set Contact Address header field to the Extension number. If this field set, do not use SIP User ID(SIP Attribute 2) for outgoing call. | OFF/ON |

## 3.12.4 SIP Attribute 2 (PGM 501)

The SIP Attribute 2 Program is used to set the SIP user table; each table bin includes settings for user ID, password, Contact number and etc. (only in PC-Admin). The maximum table bin number is 32 in ipLDK-20, 64 in ipLDK-100, and 96 in ipLDK-300 / 300E.

| PGM501 | Description | COMMENTS |
|---|---|---|
| User ID | This Admin is used to setting SIP user ID. Set SIP user ID which is used “From” Header (ex: caller@caller.domain). | Max 64 digits of character string |
| Authentication User Name | This Admin is used to setting SIP Authentication User Name. Set authentication user name if authentication is used. | Max 64 digits of character string |
| Authentication User Password | This Admin is used for setting SIP Authentication User Password; set authentication user password if authentication is used. | Max 64 digits of character string |
| Contact Number | This Admin is used for setting the Contact Number; VOIB uses the Contact header and VOIB IP address; the set station number or DID number is used to route the SIP UID. | Max 12 digits of character string |
| User ID Registration | This Admin is used for setting User ID Registration; determines registration of the SIP UID. | Provision / Register |
| User ID Usage | When value is set to ON, determines the use of the SIP User ID. | ON / OFF |
| Associated Station | This Admin is used for setting Associated Station to support SIP supplementary service:<br>- Click to dial<br>- Click to answer<br>- Voice Mail notify (only for the BroadWorks soft switch) | Station Number |

# 3.13 RSG/IP Phone (PGM 380 – 397)

## 3.13.1 VOIB SLOT ASSIGNMENT, RSG/IP PHONE (PGM 380)

The VOIB slot and VOIB channel for RSG/IP Phone can be assigned. The RSG is serviced through VOIB. So, the VOIB for RSG should be assigned. In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **380.**
3. Follow the specific Procedure as listed in the Table.

| PGM 380 | Description | Procedure | COMMENTS |
|---|---|---|---|
| VOIB Slot For RSG/IP Phone | Designates the VOIB slot assignment for RSG/IP phone. | + FLEX1 + VALUE (*slot number of VOIB*)+ **[HOLD/SAVE]** | VALUE – 09 for ipLDK-20) |
| VOIB Channel For RSG/IP Phone | Designates the VOIB Channel number used for RSP/IP phone. | + FLEX2 + VALUE (*number of Channels )* + **[HOLD/SAVE]** | VALUE – 00-24 (0-8 at ipLDK-20) |

## 3.13.2 RSG/IP PHONE PORT NUMBER ASSIGNMENT (PGM 381)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **381.**
3. Follow the specific Procedure as listed in the Table.

| PGM 381 | Description | Procedure | COMMENTS |
|---|---|---|---|
| RSG Number | The RSG number to be serviced by the System. | + FLEX1 + VALUE(*RSG Number)* + **[HOLD/SAVE]** | VALUE – 0-8 (ipLDK-20) 00-32(ipLDK-100) 00-96(ipLDK-300/300E) |
| IP Phone Number | The IP Phone number to be serviced by the System. | + FLEX2 + VALUE (*IP Phone Number)* + **[HOLD/SAVE]** | VALUE – 00-16 (ipLDK-20) 00-64 (ipLDK-100) 00-96 (ipLDK-300/300E) |

## 3.13.3 RSG/IP PHONE PORT NUMBER ASSIGNMENT (PGM 382)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **382.**
3. Follow the specific Procedure as listed in the Table.

| PGM 382 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Transfer Mode | Determines Transfer mode when using RSG; when using RSG, messages are sent to various devices using an IP Address. | + FLEX1 + VALUE + [HOLD/SAVE] | VALUES –<br>0 = IP (Default)<br>1 = MAC |
| Casting Mode | Determines Casting mode when using RSG. | + FLEX2 + VALUE + [HOLD/SAVE] | VALUES –<br>0 = UNI (Default)<br>1 = Multi |
| Tone Source | Determines the source for System tones when using RSG. | + FLEX3 + VALUE + [HOLD/SAVE] | VALUES –<br>0 = Remote (Default, RSGM/IP Phone)<br>1 = ipLDK |
| Peer to Peer | Determines if Peer-to-Peer will be used when RSG is in use. | + FLEX4 + VALUE + [HOLD/SAVE] | VALUES –<br>0 = OFF<br>1 = ON (Default) |
| Codec Type | Determines Codec Type used with RSG. | + FLEX5 + VALUE + [HOLD/SAVE] | VALUES –<br>0 = G.711_ALAW (Default)<br>1 = G.711_ULAW<br>2 = G.723.1<br>3 = G.729<br>4 = G.729A |
| First Access RSG CO | If set to ON, the Station can access a CO line using the RSG and dialing the CO Line access code in the 1st available CO group (ex., 9). | + FLEX6 + VALUE + [HOLD/SAVE] | VALUES –<br>0 = OFF<br>1 = ON (Default) |
| RING without CO Ring Assign | Designates the RSG Stations that will receive incoming CO rings, even when CO ring is not assigned. | + FLEX7 + VALUE + [HOLD/SAVE] | VALUES –<br>Default = ON<br>0 = OFF<br>1 = ON (Default) |

## 3.13.4 RSGM ATTRIBUTES I (PGM 383)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **383.**
3. Enter the appropriate *Bin number* (Range=1-8: ipLDK-20, 01-96: ipLDK-100/300/300E).
4. Follow the specific Procedure as listed in the Table.

| PGM 383 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Set MAC Address | Designates registration of RSG to the ipLDK System, enter the MAC of RSG after completing VOIB Configuration. The hex digits (A-F) can be entered by pressing buttons (refer to Button Tables) | + FLEX1 + *MAC Address* + **[HOLD/SAVE]** | VALUES – Default = 00-00-00-00-00-00 |

**BUTTON Table**

| BTN | DIGIT | BTN | DIGIT |
|---|---|---|---|
| * | A | [MUTE] | D |
| # | B | [DND] | E |
| [CB] | C | [FLASH] | F |

**LDP-7000 series Button Table**

| BTN | DIGIT | BTN | DIGIT |
|---|---|---|---|
| * | A | [Right] | D |
| # | B | [Up] | E |
| [Left] | C | [Down] | F |

| PGM 383 | Description | Procedure | COMMENTS |
|---|---|---|---|
| IP Address Display | Displays the IP Address of the RSGM. | + FLEX2 | VALUES – Default = 0.0.0.0 |
| RSG Port View | When using RSG, 2 Stations and 1 CO can be assigned; this feature allows the Station number and the CO line number to be viewed. | + FLEX3 | VALUES – Default = D, S, C D = DKT S = SLT C = CO line |
| Port Number View | Displays the Port Number of RSGM. | + FLEX4 | |
| NAT IP Address Display | Displays the NAT IP Address of RSGM. | + FLEX5 | Default = 0.0.0.0 |
| NAT Port Number View | Displays the NAT Port Numbers being used. | + FLEX6 | |
| STUN Enabled | If RSGM is connected to ipLDK system, This feature shows if the IP station use NAT of PAT(Display Only) ; None, PAT, NAT or NAT/PAT | + FLEX7 | VALUES – Default = NONE |

## 3.13.5 RSGM ATTRIBUTES II (PGM 384)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **384.**
3. Enter the appropriate *Bin number* (Range=1-8, ipLDK-20; 01-96, ipLDK-100/300/300E).
4. Follow the specific Procedure as listed in the Table.

| PGM 384 | Description | Procedure | COMMENTS |
|---|---|---|---|
| RTP Port number of Internal MOH | Used to set the internal music source RTP port. | + FLEX1 + Port number (4 digits, Default=8186) + **[HOLD/SAVE]** | |
| RTP Port number of External MOH | Use this entry to set the external music source RTP port. | + FLEX2 + Port number (4 digits, Default=8188) + **[HOLD/SAVE]** | |
| MOH Type | Selects the source of MOH type. | + FLEX3 + VALUE2 + [HOLD/SAVE] | VALUES – 0 = HOLD Tone (Default) 1 = MUSIC |
| Music Source | The RSG has one internal and one external MOH source. RSG-associated devices use their local MOH source. The music will be heard when RSG devices on RSG are held or digital keyset on RSG activates the BGM. | + FLEX4 + VALUE2 + [HOLD/SAVE] | VALUES – 0 = INT (Default) 1 = EXT1 |
| External Contact 1 | Used to assign an external contact point. Up to 2 can be assigned. | + FLEX5 + VALUE2 + Station Number (when 1-LBC is selected) + **[HOLD/SAVE]** | VALUES – Default = Not Assigned 1 = LBC 2 = Door Open |
| External Contact 2 | Used to assign an external contact point. Up to 2 can be assigned. | + FLEX6 + VALUE2 + Station Number (when 1-LBC is selected) + **[HOLD/SAVE]** | VALUES – Default = Not Assigned 1 = LBC 2 = Door Open |
| Alarm Enable | When Alarm Signal is detected from RSG, the ipLDK system gives the Alarm Ring to the Alarm assign station. And the alarm will be stop by Alarm Reset code. | + FLEX7 + VALUE2 + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Alarm Contact Type | Used to set the contact state for activating the Alarm. | + FLEX8 + VALUE2 + [HOLD/SAVE] | VALUES – 0 = OPEN 1 = CLOSE (Default) |
| Alarm/Door Bell Mode | Used to designate if the contact will be treated as a doorbell instead of an alarm. | + FLEX9 + VALUE2 + [HOLD/SAVE] | VALUES – 0 = BELL 1 = ALARM (Default) |
| Alarm Signal | Designates if assigned stations will receive a repeating signal or single burst (ONCE) as the alarm tone. | + FLEX10 + VALUE2 + [HOLD/SAVE] | VALUES – 0 = ONCE 1 = RPT (Default) |
| CTI Port | CTI port to be assigned in RSG. | + FLEX11 + VALUE2 + [HOLD/SAVE] | VALUES – 0 = NOT USED (Default) 1 = DKTU in RSG 2 = SLT in RSG |
| RSG Nation Code | Used to set RSG device gains (Nation Code). | + FLEX12 + Nation Code (Default=NOT USED) + **[HOLD/SAVE]** | |
| IPSEC | If this feature is set to ON, RSG uses IPSEC. | + FLEX13 + VALUE2 + [HOLD/SAVE] | VALUES – 0 = OFF (Default) 1 = ON |

## 3.13.6 RSG ALARM ASSIGNMENT (PGM 385)

In this program mode, the following items can be customized:

5. Press the **[TRANS/PGM]** button.
6. Dial **385.**
7. Follow the specific Procedure as listed in the Table.

| PGM 385 | Description | Procedure | COMMENTS |
|---|---|---|---|
| RTP Port number of Internal MOH | The Station can receive alarm ringing when a RSG alarm is detected. | + *Station Range* + *RSG Bin number* (FLEX1-FLEX8) + **[HOLD/SAVE]** | |

## 3.13.7 IP PHONE ATTRIBUTES (PGM 386)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **386.**
3. Follow the specific Procedure as listed in the Table.

| PGM 386 | Description | Procedure | COMMENTS |
|---|---|---|---|
| Set MAC Address | Used to register an IP Phone to the System, by entering its MAC Address (refer to Button Table). | + *Bin number* (Range=01-16) + **FLEX1** + *MAC Address* (Default=00-00-00-00-00-00) + **[HOLD/SAVE]** | |

**BUTTON TABLE**

| BTN | DIGIT | BTN | DIGIT |
|---|---|---|---|
| * | A | [MUTE] | D |
| # | B | [DND] | E |
| [CB] | C | [FLASH] | F |

**LDP-7000 series Button Table**

| BTN | DIGIT | BTN | DIGIT |
|---|---|---|---|
| * | A | [Right] | D |
| # | B | [Up] | E |
| [Left] | C | [Down] | F |

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **386.**
3. Enter the appropriate *Bin number* (Range=01-16: ipLDK-20, 01-96 :ipLDK-100/300/300E).
4. Follow the specific Procedure as listed in the Table.

| PGM 386 | Description | Procedure | COMMENTS |
|---|---|---|---|
| IP Address Display | Displays the IP Address of the IP phone. | + FLEX2 | |
| Port View | Once a connection is made to the System, the current Station number will be displayed. | + FLEX3 | |
| Port Number View | Displays the Port Number of IP phone. | + FLEX4 | |
| NAT IP Address Display | Displays the NAT IP Address of IP phone. | + FLEX5 | |
| NAT Port Number | Displays the NAT Port Numbers being used. | + FLEX6 | |
| STUN Enabled | If IP Phone is connected to ipLDK system, This feature shows if the IP station use NAT of PAT(Display Only) ; None, PAT, NAT or NAT/PAT | + FLEX7 | |
| CTI Port | CTI IP Address to supports first party CTI. | + FLEX8 + VALUE + **[HOLD/SAVE]** | VALUES – 0 = NOT USED 1 = DKT 2 = SLT |
| IPSEC | When value is set to ON, VOIB uses IPSEC. | + FLEX9 + VALUE (Default=OFF)+ **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Outside NAT Firewall | If this value is set to ON, the device will be located in NAT. | + FLEX10 + VALUE + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| User ID | Phontage can be registered to the system by entering the appropriate User ID/Password, even if their MAC address is changed. | + FLEX11 + VALUE + **[HOLD/SAVE]** | VALUES – MAX 12 CHRACTERS |
| User Password | Phontage can be registered to the system by entering this User ID / Password, even if their MAC address is changed. | + FLEX12 + VALUE + **[HOLD/SAVE]** | VALUES – MAX 12 CHRACTERS |

## 3.13.8 RSG DKT RX GAIN CONTROL (PGM 390)

The RX gain of DKT on RSG can be adjusted:

| FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | RSG_DKT RX from DKTU | 00 – 63 | | |
| 2 | RSG_DKT RX from SLT | 00 – 63 | | |
| 3 | RSG_DKT RX from CTR_SLT | 00 – 63 | | |
| 4 | RSG_DKT RX from WKT | 00 – 63 | | |
| 5 | RSG_DKT RX from ACO | 00 – 63 | | |
| 6 | RSG_DKT RX from CTR_ACO | 00 – 63 | | |
| 7 | RSG_DKT RX from DCO | 00 – 63 | | |
| 8 | RSG_DKT RX from VMIB | 00 – 63 | | |
| 9 | RSG_DKT RX from DTMF | 00 – 63 | | |
| 10 | RSG_DKT RX from TONE | 00 – 63 | | |
| 11 | RSG_DKT RX from MUSIC 1 | 00 – 63 | | |
| 12 | RSG_DKT RX from MUSIC 2 | 00 – 63 | | |
| 13 | RSG_DKT RX from RSG_DKT | 00 – 63 | | |
| 14 | RSG_DKT RX from RSG_SLT | 00 – 63 | | |
| 15 | RSG_DKT RX from RSG_LCO | 00 – 63 | | |
| 16 | RSG_DKT RX from IP Phone | 00 – 63 | | |

## 3.13.9 RSG DKT TX GAIN CONTROL (PGM 391)

The TX gain of DKT on RSG can be adjusted:

| FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | RSG_DKT RX to DKTU | 00 – 63 | | |
| 2 | RSG_DKT RX to SLT | 00 – 63 | | |
| 3 | RSG_DKT RX to CTR_SLT | 00 – 63 | | |
| 4 | RSG_DKT RX to WKT | 00 – 63 | | |
| 5 | RSG_DKT RX to ACO | 00 – 63 | | |
| 6 | RSG_DKT RX to CTR_ACO | 00 – 63 | | |
| 7 | RSG_DKT RX to DCO | 00 – 63 | | |
| 8 | RSG_DKT RX to DVU | 00 – 63 | | |

## 3.13.10 RSG SLT RX GAIN CONTROL (PGM 392)

The RX gain of SLT on RSG can be adjusted:

| FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | RSG_SLT RX from DKTU | 00 – 63 | | |
| 2 | RSG_SLT RX from SLT | 00 – 63 | | |
| 3 | RSG_SLT RX from CTR_SLT | 00 – 63 | | |
| 4 | RSG_SLT RX from WKT | 00 – 63 | | |
| 5 | RSG_SLT RX from ACO | 00 – 63 | | |
| 6 | RSG_SLT RX from CTR_ACO | 00 – 63 | | |
| 7 | RSG_SLT RX from DCO | 00 – 63 | | |
| 8 | RSG_SLT RX from VMIB | 00 – 63 | | |
| 9 | RSG_SLT RX from DTMF | 00 – 63 | | |
| 10 | RSG_SLT RX from TONE | 00 – 63 | | |
| 11 | RSG_SLT RX from MUSIC 1 | 00 – 63 | | |
| 12 | RSG_SLT RX from MUSIC 2 | 00 – 63 | | |
| 13 | RSG_SLT RX from RSG_DKT | 00 – 63 | | |
| 14 | RSG_SLT RX from RSG_SLT | 00 – 63 | | |
| 15 | RSG_SLT RX from RSG_LCO | 00 – 63 | | |
| 16 | RSG_SLT RX from IP Phone | 00 – 63 | | |

## 3.13.11 RSG SLT TX GAIN CONTROL (PGM 393)

The TX gain of SLT on RSG can be adjusted:

| FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | RSG_SLT RX to DKTU | 00 – 63 | | |
| 2 | RSG_SLT RX to SLT | 00 – 63 | | |
| 3 | RSG_SLT RX to CTR_SLT | 00 – 63 | | |
| 4 | RSG_SLT RX to WKT | 00 – 63 | | |
| 5 | RSG_SLT RX to ACO | 00 – 63 | | |
| 6 | RSG_SLT RX to CTR_ACO | 00 – 63 | | |
| 7 | RSG_SLT RX to DCO | 00 – 63 | | |
| 8 | RSG_SLT RX to DVU | 00 – 63 | | |

## 3.13.12 RSG LCO RX GAIN CONTROL (PGM 394)

The RX gain of LCO on RSG can be adjusted:

| FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | RSG_LCO RX from DKTU | 00 – 63 | | |
| 2 | RSG_LCO RX from SLT | 00 – 63 | | |
| 3 | RSG_LCO RX from CTR_SLT | 00 – 63 | | |
| 4 | RSG_LCO RX from WKT | 00 – 63 | | |
| 5 | RSG_LCO RX from ACO | 00 – 63 | | |
| 6 | RSG_LCO RX from CTR_ACO | 00 – 63 | | |
| 7 | RSG_LCO RX from DCO | 00 – 63 | | |
| 8 | RSG_LCO RX from VMIB | 00 – 63 | | |
| 9 | RSG_LCO RX from DTMF | 00 – 63 | | |
| 10 | RSG_LCO RX from TONE | 00 – 63 | | |
| 11 | RSG_LCO RX from MUSIC 1 | 00 – 63 | | |
| 12 | RSG_LCO RX from MUSIC 2 | 00 – 63 | | |
| 13 | RSG_LCO RX from RSG_DKT | 00 – 63 | | |
| 14 | RSG_LCO RX from RSG_SLT | 00 – 63 | | |
| 15 | RSG_LCO RX from RSG_LCO | 00 – 63 | | |
| 16 | RSG_LCO RX from IP Phone | 00 – 63 | | |

## 3.13.13 RSG LCO TX GAIN CONTROL (395)

The TX gain of LCO on RSG can be adjusted:

| FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | RSG_LCO RX to DKTU | 00 – 63 | | |
| 2 | RSG_LCO RX to SLT | 00 – 63 | | |
| 3 | RSG_LCO RX to CTR_SLT | 00 – 63 | | |
| 4 | RSG_LCO RX to WKT | 00 – 63 | | |
| 5 | RSG_LCO RX to ACO | 00 – 63 | | |
| 6 | RSG_LCO RX to CTR_ACO | 00 – 63 | | |
| 7 | RSG_LCO RX to DCO | 00 – 63 | | |
| 8 | RSG_LCO RX to DVU | 00 – 63 | | |

## 3.13.14 RSG IP PHONE RX GAIN CONTROL (PGM 396)

The RX gain of IP Phone on RSG can be adjusted:

| FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | RSG_IP PHONE RX from DKTU | 00 – 63 | | |
| 2 | RSG_IP PHONE RX from SLT | 00 – 63 | | |
| 3 | RESERVED | | | |
| 4 | RESERVED | | | |
| 5 | RSG_IP PHONE RX from ACO | 00 – 63 | | |
| 6 | RESERVED | | | |
| 7 | RSG_IP PHONE RX from DCO | 00 – 63 | | |
| 8 | RSG_IP PHONE RX from VMIB | 00 – 63 | | |
| 9 | RSG_IP PHONE RX from DTMF | 00 – 63 | | |
| 10 | RSG_IP PHONE RX from TONE | 00 – 63 | | |
| 11 | RSG_IP PHONE RX from MUSIC 1 | 00 – 63 | | |
| 12 | RSG_IP PHONE RX from MUSIC 2 | 00 – 63 | | |
| 13 | RESERVED | | | |
| 14 | RESERVED | | | |
| 15 | RESERVED | | | |
| 16 | RSG_IP PHONE RX from IP Phone | 00 – 63 | | |

## 3.13.15 RSG IP PHONE TX GAIN CONTROL (PGM 397)

The TX gain of IP Phone on RSG can be adjusted:

| FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|
| 1 | RSG_IP PHONE RX to DKTU | 00 – 63 | | |
| 2 | RSG_IP PHONE RX to SLT | 00 – 63 | | |
| 3 | RESERVED | | | |
| 4 | RESERVED | | | |
| 5 | RSG_IP PHONE RX to ACO | 00 – 63 | | |
| 6 | RESERVED | | | |
| 7 | RSG_IP PHONE RX to DCO | 00 – 63 | | |
| 8 | RSG_IP PHONE RX to DVU | 00 – 63 | | |

# 3.14 SMS Attributes (Reserved)

## 3.14.1 SMSB ATTRIBUTES (PGM 290)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **290.**
3. Follow the specific Procedure as listed in the Table.

| PGM 290 | Description | Procedure | COMMENTS |
|---|---|---|---|
| IP Address (Skip:#) | This ADMIN program is used for setting the IP address of the SMS board. | + FLEX1 + IP Address (12 digits) + **[HOLD/SAVE]** | |
| Gateway Address (Skip:#) | This ADMIN program is used for setting the gateway address of the SMS board. | + FLEX2 + IP Address (12 digits) + **[HOLD/SAVE]** | |
| SUBNET Mask (Skip:#) | This ADMIN program is used for setting the subnet mask of the SMS board. | + FLEX3 + Subnet Mask (12 digits) + **[HOLD/SAVE]** | VALUES – Default = 255.255.255.0 |
| SERVER Address (Skip:#) | This ADMIN program is used for setting the IP address of TFTP BOOT Server. | + FLEX4 + DNS Address (12 digits) + **[HOLD/SAVE]** | (LAB Only) |
| Trace Password | This ADMIN program is used for setting the password of the SMS board. | + FLEX5 + VALUE (10 Characters, refer to Keyset Map) + **[HOLD/SAVE]** | |

**Keyset Map**

| | | |
|---|---|---|
| . – 13<br>Q – 11<br>Z – 12<br>1 – 10 | A – 21<br>B – 22<br>C – 23<br>2 – 20 | D – 31<br>E – 32<br>F – 33<br>3 – 30 |
| G – 41<br>H – 42<br>I – 43<br>4 – 40 | J – 51<br>K – 52<br>L – 53<br>5 – 50 | M – 61<br>N – 62<br>O – 63<br>6 – 60 |
| P – 71<br>Q – 72<br>R – 73<br>S – 74<br>7 – 70 | T – 81<br>U – 82<br>V – 83<br>8 – 80 | W– 91<br>X – 92<br>Y – 93<br>Z – 94<br>9 – 90 |
| ✳1–Blank<br>✳2 - :<br>✳3 - , | 0 – 00 | |

## 3.14.2 SMSB SETTING (PGM 291)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **291.**
3. Follow the specific Procedure as listed in the Table.

| PGM 291 | Description | Procedure | COMMENTS |
|---|---|---|---|
| SMS Center Number | This number is dialed when we submit a Short Message | + FLEX1 + VALUE (8 digits max.)+ **[HOLD/SAVE]** | |
| SMS Center CLI | This number should be matched with the Caller ID of an incoming SMS call to receive the Short Message | + FLEX2 + VALUE (8 digits max.)+ **[HOLD/SAVE]** | |

## 3.14.3 SMSB CO ATTRIBUTES (PGM 292)

In this program mode, the following items can be customized:

1. Press the **[TRANS/PGM]** button.
2. Dial **292.**
3. Enter appropriate CO Range.
4. Follow the specific Procedure as listed in the Table.

| PGM 291 | Description | Procedure | COMMENTS |
|---|---|---|---|
| SMS Receive Station | A Station can decide to receive SMS from the CO line or not. | + FLEX1 + *Station Range* + VALUE + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| View SMS Receive Station | Shows the Stations that receive SMS from the CO line. | + FLEX2 | |
| SMS Outgoing CO | If this feature is set to ON, SMS can be sent through selected CO line. | + FLEX3 + VALUE + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |
| Non – CID SMS (Korea Only) | If this feature is set to ON, SMS can be received when it is serviced through non-CID PSTN line. | + FLEX4 + VALUE + **[HOLD/SAVE]** | VALUES – 0 = OFF 1 = ON |

# 3.15 Other Tables

## 3.15.1 NATION SPECIFIC (PGM 400 – 423)

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 400 | | DTIB RX Gain | | | Korean version |
| | 1 | DTIB/DKT | 00 – 63 | 30 | |
| | 2 | DTIB/SLT | 00 – 63 | 30 | |
| | 3 | DTIB/CTR SL | 00 – 63 | 22 | Not in ipLDK-20 |
| | 4 | DTIB/WTU | 00 – 63 | 26 | Not in ipLDK-20 |
| | 5 | DTIB/ACO | 00 – 63 | 26 | |
| | 6 | | | | |
| | 7 | DTIB/DCO | 00 – 63 | 33 | |
| | 8 | DTIB/VMIB | 00 – 63 | 29 | |
| | 9 | DTIB/DTMF | 00 – 63 | 08 | |
| | 10 | DTIB/TONE | 00 – 63 | 32 | |
| | 11 | DTIB/MUSIC1 | 00 – 63 | 29 | |
| | 12 | DTIB/MUSIC2 | 00 – 63 | 29 | |
| | 13 | DTIB/MUSIC3 | 00 – 63 | 29 | |
| 401 | | SLIB RX Gain | | | |
| | 1 | SLIB/DKT | 00 – 63 | 42 | |
| | 2 | SLIB/SLT | 00 – 63 | 48 | |
| | 3 | SLIB/CTR SL | 00 – 63 | 12 | |
| | 4 | SLIB/WTU | 00 – 63 | 12 | Not in ipLDK-20<br>ipLDK-100: Default 27 |
| | 5 | SLIB/ACO | 00 – 63 | 40 | Not in ipLDK-20<br>ipLDK-100: Default 16 |
| | 6 | SLIB/CTR CO | 00 – 63 | 20 | Not in ipLDK-20 |
| | 7 | SLIB/DCO | 00 – 63 | 36 | |
| | 8 | SLIB/VMIB | 00 – 63 | 42 | |
| | 9 | SLIB/DTMF | 00 – 63 | 38 | |
| | 10 | SLIB/TONE | 00 – 63 | 30 | |
| | 11 | SLIB/MUSIC1 | 00 – 63 | 42 | |
| | 12 | SLIB/MUSIC2 | 00 – 63 | 42 | |
| | 13 | SLIB/MUSIC3 | 00 – 63 | 20 | |
| 402 | | CTR SLIB RX Gain | | | Not in ipLDK-20 |
| | 1 | CTRSL2/DKT | 00 – 63 | 32 | |
| | 2 | CTRSL2/SLT | 00 – 63 | 43 | ipLDK-100 : Default 47 |
| | 3 | CTRSL2/ CTR SL | 00 – 63 | 32 | ipLDK-100 : Default 36 |
| | 4 | CTRSL2/WTU | 00 – 63 | 32 | |
| | 5 | CTRSL2/ACO | 00 – 63 | 41 | |
| | 6 | CTRSL2/ATR CO | 00 – 63 | 32 | |
| | 7 | CTRSL2/DCO | 00 – 63 | 44 | |
| | 8 | CTRSL2/VMIB | 00 – 63 | 40 | |
| | 9 | CTRSL2/DTMF | 00 – 63 | 28 | |
| | 10 | CTRSL2/TONE | 00 – 63 | 38 | |
| | 11 | CTRSL2/MUSIC1 | 00 – 63 | 40 | |
| | 12 | CTRSL2/MUSIC2 | 00 – 63 | 40 | |
| | 13 | CTRSL2/MUSIC3 | 00 – 63 | 40 | |

| | | | | | |
|---|---|---|---|---|---|
| 403 | | WTIB RX Gain | | | |
| | 1 | WTIB/DKT | 00 – 63 | 26 | |
| | 2 | WTIB /SLT | 00 – 63 | 33 | |
| | 3 | WTIB/CTR SL | 00 – 63 | 22 | |
| | 4 | WTIB /WTU | 00 – 63 | 26 | |
| | 5 | WTIB/ACO | 00 – 63 | 38 | |
| | 6 | WTIB/CTR CO | 00 – 63 | 29 | |
| | 7 | WTIB/DCO | 00 – 63 | 33 | |
| | 8 | WTIB/VMIB | 00 – 63 | 29 | |
| | 9 | WTIB/DTMF | 00 – 63 | 8 | |
| | 10 | WTIB/TONE | 00 – 63 | 37 | |
| | 11 | WTIB/MUSIC1 | 00 – 63 | 29 | |
| | 12 | WTIB/MUSIC2 | 00 – 63 | 29 | |
| | 13 | WTIB/MUSIC3 | 00 – 63 | 29 | |
| 404 | | ACOB RX Gain | | | |
| | 1 | ACOB/DKT | 00 – 63 | 43 | |
| | 2 | ACOB/SLT | 00 – 63 | 40 | |
| | 3 | ACOB/CTR SL | 00 – 63 | 32 | Not in ipLDK-20 |
| | 4 | ACOB/WTU | 00 – 63 | 32 | |
| | 5 | ACOB/ACO | 00 – 63 | 40 | |
| | 6 | | | | |
| | 7 | ACOB/DCO | 00 – 63 | 42 | |
| | 8 | ACOB/VMIB | 00 – 63 | 41 | |
| | 9 | ACOB/DTMF | 00 – 63 | 35 | |
| | 10 | ACOB/TONE | 00 – 63 | 47 | |
| | 11 | ACOB/MUSIC1 | 00 – 63 | 41 | |
| | 12 | ACOB/MUSIC2 | 00 – 63 | 41 | |
| | 13 | ACOB/MUSIC3 | 00 – 63 | 32 | |
| | 14 | ACOB/MODEM | 00 – 63 | 40 | |
| 406 | | DCOB RX Gain | | | |
| | 1 | DCOB/DKT | 00 – 63 | 26 | |
| | 2 | DCOB/SLT | 00 – 63 | 37 | |
| | 3 | DCOB/CTR SL | 00 – 63 | 26 | Not in ipLDK-20 |
| | 4 | DCOB/WTU | 00 – 63 | 26 | Not in ipLDK-20 |
| | 5 | DCOB/ACO | 00 – 63 | 24 | |
| | 6 | DCOB/CTR CO | 00 – 63 | 15 | Not in ipLDK-20 |
| | 7 | DCOB/DCO | 00 – 63 | 32 | |
| | 8 | DCOB/VMIB | 00 – 63 | 32 | |
| | 9 | DCOB/DTMF | 00 – 63 | 32 | |
| | 10 | DCOB/TONE | 00 – 63 | 32 | |
| | 11 | DCOB/MUSIC1 | 00 – 63 | 32 | |
| | 12 | DCOB/MUSIC2 | 00 – 63 | 32 | |
| | 13 | DCOB/MUSIC3 | 00 – 63 | 32 | |
| | 14 | DCOB/MODEM | 00 – 63 | 37 | |
| 407 | | VMIB RX Gain | | | |
| | 1 | VMIB/DKT | 00 – 63 | 36 | |
| | 2 | VMIB/SLT | 00 – 63 | 36 | |
| | 3 | VMIB/CTR SL | 00 – 63 | 21 | Not in ipLDK-20 |
| | 4 | VMIB/WTU | 00 – 63 | 26 | |
| | 5 | VMIB/ACO | 00 – 63 | 36 | |
| | 6 | VMIB/CTR CO | 00 – 63 | 23 | Not in ipLDK-20 |
| | 7 | VMIB/DCO | 00 – 63 | 36 | |
| | 8 | VMIB/MUSIC1 | 00 – 63 | 32 | |
| | 9 | VMIB/MUSIC2 | 00 – 63 | 32 | |
| 408 | | DTMF RC Gain | | | |
| | 1 | DTMF/SLT | 00 – 63 | 23 | |
| | 2 | DTMF RC/CTR SL | 00 – 63 | 17 | Not in ipLDK-20 |
| | 3 | DTMF/ACO | 00 – 63 | 15 | |
| | 4 | DTMF RC/CTR CO | 00 – 63 | 15 | Not in ipLDK-20 |
| | 5 | DTMF/DCO | 00 – 63 | 24 | |

| | | | | | |
|---|---|---|---|---|---|
| 409 | | EXT PAGE Gain | | | |
| | 1 | EXT PAGE/DKT | 00 – 63 | 26 | |
| | 2 | EXT PAGE/SLT | 00 – 63 | 32 | |
| | 3 | Ext PAGE/CTR SL | 00 – 63 | 26 | Not in ipLDK-20 |
| | 4 | EXT PAGE/WTU | 00 – 63 | 26 | |
| | 5 | EXT PAGE/ACO | 00 – 63 | 28 | |
| | 6 | EXT PAGE/CTR CO | 00 – 63 | 28 | Not in ipLDK-20 |
| | 7 | EXT PAGE/DCO | 00 – 63 | 37 | |
| | 8 | EXT PAGE/VMIB | 00 – 63 | 37 | |
| | 9 | EXT PAGE/MUSIC1 | 00 – 63 | 37 | |
| | 10 | EXT PAGE/MUSIC2 | 00 – 63 | 37 | |
| | 11 | EXT PAGE/MUSIC3 | 00 – 63 | 37 | |
| 410 | | CPT Gain | | | |
| | 1 | CPT/ACO | 00 – 63 | 15 | |
| | 2 | CPT/CTR CO | 00 – 63 | 15 | Not in ipLDK-20 |
| | 3 | CPT/DCO | 00 – 63 | 24 | |
| 411 | | MODEM Gain | | | |
| | 1 | MODEM/ACO | 00 – 63 | 20 | |
| | 2 | MODEM/CTR CO | 00 – 63 | 20 | Not in ipLDK-20 |
| | 3 | MODEM/DCO | 00 – 63 | 24 | |
| 412 | | Short SLIB Gain | | | SAF only |
| | 1 | Shot ACO | 00 – 63 | 28 | |
| | 2 | Long ACO | 00 – 63 | 32 | |
| 413 | | Long SLIB Gain | | | SAF only |
| | 1 | Shot ACO | 00 – 63 | 37 | |
| | 2 | Long ACO | 00 – 63 | 37 | |
| 414 | | Far SLIB Gain | | | SAF only |
| | 1 | Shot ACO | 00 – 63 | 45 | |
| | 2 | Long ACO | 00 – 63 | 45 | |
| 415 | | Short ACO Gain | | | SAF only |
| | 1 | Short SLIB | 00 – 63 | 34 | |
| | 2 | Long SLIB | 00 – 63 | 46 | |
| | 3 | Far SLIB | 00 – 63 | 52 | |
| | 4 | DTIB | 00 – 63 | 26 | |
| 416 | | Long ACO Gain | | | SAF only |
| | 1 | Short SLIB | 00 – 63 | 34 | |
| | 2 | Long SLIB | 00 – 63 | 42 | |
| | 3 | Far SLIB | 00 – 63 | 48 | |
| | 4 | DTIB | 00 – 63 | 32 | |
| 417 | | SMSB Rx Gain | | | Not in ipLDK-20 |
| | 1 | From ACO | 00 – 63 | 24 | |
| | 2 | From CTR ACO | 00 – 63 | 20 | |
| | 3 | From CTR SLT | 00 – 63 | 17 | |
| | 4 | From DCO | 00 – 63 | 33 | |
| 418 | | SMSB Tx Gain | | | Not in ipLDK-20 |
| | 1 | To ACO | 00 – 63 | 32 | |
| | 2 | To CTR ACO | 00 – 63 | 32 | |
| | 3 | To CTR SLT | 00 – 63 | 32 | |
| | 4 | To DCO | 00 – 63 | 32 | |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 420 | | System Tone Frequency | | | |
| | 1 | Dial Tone | 4digits | 0400, 0425 | |
| | 2 | Ring Back Tone | 4digits | 0400, 0425 | |
| | 3 | Busy Tone | 4digits | 0400, 0000 | |
| | 4 | Error Tone | 4digits | 0400, 0000 | |
| | 5 | Dummy Dial Tone | 4digits | 0350, 0440 | |
| 421 | | Differential Ring Frequency | | | |
| | 1 | Ring 1 | 4digits | 1000, 1020 | |
| | 2 | Ring 2 | 4digits | 0890, 0910 | |
| | 3 | Ring 3 | 4digits | 1260, 1280 | |
| | 4 | Ring 4 | 4digits | 0800, 0820 | |
| 422 | | Distinct Ring Frequency | | | |
| | 1 | Ring 1 | 4digits | 0480, 0000 | |
| | 2 | Ring 2 | 4digits | 0400, 0000 | |
| | 3 | Ring 3 | 4digits | 0620, 0000 | |
| | 4 | Ring 4 | 4digits | 0770, 0000 | |
| 423 | | ACNR Tone Cadence | | | |
| | 1 | Ring-Back Tone | 0-255 | 050, 100 | 20msec base |
| | 2 | Busy Tone | 0-255 | 025, 025 | 20msec base |
| | 3 | Error Tone | 0-255 | 012, 012 | 20msec base |
| | 4 | S –Dial Tone | 0-255 | 070, 000 | 20msec base |
| 424 | | DTIB ACO Rx Gain | | | SAF only |
| | 1 | Short ACO | 00 – 63 | 37 | |
| | 2 | Long ACO | 00 – 63 | 42 | |

## 3.15.2 INITIALIZATION (PGM 450)

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 450 | | Initialization | | | |
| | 1 | Flexible Numbering Plan Initialization | | | PGM105, PGM106, PGM107 |
| | 2 | Station Database Initialization | | | PGM110, PGM111, PGM112, PGM113, PGM114, PGM 116, PGM117, PGM118, PGM119, PGM121,PGM122, PGM123, PGM124, PGM179 |
| | 3 | CO Line Database Initialization | | | PGM140, PGM141, PGM142, PGM143, PGM144 |
| | 4 | System Feature Database Initialization | | | PGM160 – PGM 177, PGM108 |
| | 5 | Station Group Database Initialization | | | PGM190, PGM191 |
| | 6 | ISDN Tables Database Initialization | | | PGM201, PGM202, PGM230, PGM231 |
| | 7 | Reserved | | | None(Reserved) |
| | 8 | System Timer Database Initialization | | | PGM180 – PGM182 |
| | 9 | Toll Table Database Initialization | | | PGM224, PGM225 |
| | 10 | LCR Database Initialization | | | PGM220 – PGM222 |
| | 11 | Tables Initialization | | | PGM227 – PGM229,PGM232 – PGM235 |
| | 12 | Flexible Button Program Initialization | | | PGM115 |
| | 13 | Networking Database Initialization | | | PGM320,PGM321,PGM322,PGM323, PGM 324 |
| | 14 | All Database Initialization | | | All of PGM 450 |
| | 15 | System Reset By Software | | | |
| | 16 | DID Reroute Table | | | Reroute DEST of PGM 231 |
| | 17 | Board Data | | | PGM 340, 341, 155 |

## 3.15.3 PRINT PROTECTED DATABASE (PGM 451)

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 451 | | Print Protected Data | | | |
| | 1 | Flexible Numbering Plan Print | | | |
| | 2 | Station Database Print | STN_R | | |
| | 3 | CO Line Database Print | CO_R | | |
| | 4 | System Feature Database Print | | | |
| | 5 | Station Group Database Print | | | |
| | 6 | ISDN Tables Database Print | | | |
| | 7 | System Timer Database Print | | | |
| | 8 | Toll Table Database Print | | | |
| | 9 | LCR Database Print | | | |
| | 10 | Other Tables Print | | | |
| | 11 | Nation Specific Database Print | | | |
| | 12 | Flexible Button Program Print | STN_R | | |
| | 13 | Networking Data Print | | | |
| | 14 | All Database Print | | | |
| | 15 | LCD Message Print | | | |
| | | 1 Language | 00 – 15 | Nation specific | 00 = ENG 01 = ITA 02 = FIN<br>03 = DUT 04 = SWE 05 = DAN<br>06 = NOR 07 = HUN 08 = GER<br>09 = FRE 10 = POR 11 = SPA<br>12 = KOR 13 = EST 14 = RUS<br>15 = TUR |
| | | 2 Station Type | 0 – 2 | 0 | 0 = NORMAL<br>1 = LG-GAP<br>2 = LARGE |
| | 16 | Quit Print | | | |

## 3.15.4 INIT DATABASE BY MPB VERSION (PGM 452)

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 452 | | Init by MPB Version | | | |
| | 1 | From Version 2.2 | | | Not in ipLDK-20 |
| | 2 | Station Name | | | Not in ipLDK-20 |
| | 3 | From Version 2.3 | | | Not in ipLDK-20 |
| | 4 | From Version 2.5 | | | Not in ipLDK-20 |
| | 5 | From Version 3.0 | | | Not in ipLDK-20 |
| | 6 | From Version 3.2 | | | Not in ipLDK-20 |
| | 7 | From Version 3.3 | | | Not in ipLDK-20 |
| | 8 | From Version 3.5 | | | Not in ipLDK-20 |
| | 9 | From Version 3.6 | | | |
| | 10 | From Version 3.7 | | | |
| | 11 | From Version 3.8 | | | |

# 4. QUICK REFERENCE ADMIN. PROGRAMMING TABLE

## 4.1 Numbering Plan

### 4.1.1 FLEXIBLE NUMBERING PLAN

The following numbering plan can be changed by ADMIN Programming 104-107 and 109 depending on User needs.

| NUMBER | ITEM | REMARK |
|---|---|---|
| 10 – 35 (ipLDK-20)<br>100 – 227 (ipLDK-100)<br>100 – 399 (LDK-300)<br>1000-1599 (ipLDK-300E) | Intercom Call | |
| 620-629 (ipLDK-20)<br>620-634 (ipLDK-100)<br>620 – 667 (ipLDK-300/300E) | Group Pilot Number | |
| 501-510 (ipLDK-20)<br>501-515 (ipLDK-100)<br>501 – 535 (ipLDK-300/300E) | Internal Page Zone | |
| 543 | Internal All Call Page | |
| 544 | Meet Me Page | |
| 545 | External Page Zone 1 | |
| 546 (Not in ipLDK-20) | External Page Zone 2 | |
| 547 (Not in ipLDK-20) | External Page Zone 3 | |
| 548 | External All Call Page | |
| 549 | All Call Page (Int & Ext) | |
| 550 | SMDR Account Code Enter | SLT |
| 551 | Flash Command to CO Line | SLT |
| 552 | Last Number Redial | SLT |
| 553 | DND (Toggle On/Off) | SLT |
| 554 | Call Forward | SLT |
| 555 | Speed Dial Programming | SLT |
| 556 | Message Wait/Callback Enable | SLT |
| 557 | Message Wait/Callback Return | SLT |
| 558 | Speed Dial Access | SLT |
| 559 | Cancel DND/FWD/Pre-MSG | SLT |
| 560 | System Hold | SLT |
| 563 | Programming Mode Enter Code | SLT |
| 564 | ACD Reroute | |
| 565 | Alarm Reset | |
| 566 | Group Call Pickup | |
| 568 | Hunt DND | |
| 569 | Night Answer | |
| 601-608 (ipLDK-20)<br>601-610 (ipLDK-100)<br>601 – 619 (ipLDK-300/300E) | Call Parking Locations | |
| 7 | Direct Call Pickup | |
| 801-808 (ipLDK-20)<br>801-824 (ipLDK-100)<br>801-872 (ipLDK-300/300E) | CO Line Group Access | |
| 8801-8816 (ipLDK-20)<br>8801-8840 (ipLDK-100)<br>88001-88200 (ipLDK-300/300E) | Individual CO Access | |

| NUMBER | ITEM | REMARK |
|---|---|---|
| 8901 | Tie Routing Access | |
| 8* | Retrieve Held CO Line | |
| 8#xx (ipLDK-300/300E) | Retrieve Held Individual CO Line | |
| 9 | Access CO Line in the 1st available CO Line Group | |
| 0 | Attendant Call | |
| #*1 | 1st Door Open | |
| #*2 | 2nd Door Open | |
| #*3 (Not in ipLDK-20) | 3rd Door Open | |
| #*4 (Not in ipLDK-20) | 4th Door Open | |
| #*5 (Not in ipLDK-20) | 5th Door Open | |
| #*6 (Not in ipLDK-20) | 6th Door Open | |
| #*7 (Not in ipLDK-20/100) | 7th Door Open | |
| *8 | VM Message Waiting Enable | |
| *9 | VM Message Waiting Disable | |
| #0 | MCID Request | |
| #1 | 1st RSG Door Open | |
| #2 | 2nd RSG Door Open | |
| 571-579(ipLDK-100)<br>571-579(ipLDK-300/300E) | Conference Room Enter | |
| 58 | SLT Conference Paging | |
| ## | Unsupervised conference Timer Extension | |
| #1 | Remote MEX control | |

To enter user programming mode, press the **[TRANS/PGM]** button in a keyset or dial 5 6 3 (Programming enter code) in a SLT.

## 4.1.2 STATION PROGRAMMING

The following numbering plan is fixed, so it cannot be changed by ADMIN Programming.

| NUMBER | ITEM | REMARK |
|---|---|---|
| 11 | Differential Ring | Keyset |
| 12 | Intercom Answer Mode (1 HF / 2 TONE / 3 PV) | Keyset |
| 13 | SMS Message Display | LDP Keyset |
| 14 | Enblock Mode | LDP Keyset |
| 15 | SMS/ Notice Display | LDP Keyset |
| 16 | Scroll Speed | LDP Keyset |
| 17 | Ear-Mic Headset | LDP Keyset |
| 18 | ICM Ring | LDP Keyset |
| 19 | CO Ring | LDP Keyset |
| 21 | Station COS Down | |
| 22 | Station COS Restore | |
| 23 | Walking COS | Keyset |
| 24 | COS Change | |
| 25 | SMS Inbox | |
| 26 | Delete All SMS Messages | |
| 31 | Authorization Code Registration | |
| 32 | Authorization Code Change | |
| 33 | Registration Mobile – Extension | |
| 34 | Active Mobile – Extension | |
| 35 | Register Mobile Extension CLI | |
| 36 | Active Mobile Hunt | |
| 37 | Msg Wait To Mobile Extension | |
| 41 | Wake-up Time Registration (One-time/ Continuous) | |
| 42 | Wake-up Time Cancel | |
| 43 | Activate Conference Room | |
| 44 | Deactivate Conference Room | |
| 45 | Call Coverage Usage | |
| 46 | Register Call Coverage | |
| 51 | Pre-selected MSG Activation | |

| NUMBER | ITEM | REMARK |
|---|---|---|
| 52 | Set Custom Message | |
| 61 | Record VMIB User Greeting | |
| 62 | Listen VMIB Time & Date | |
| 63 | Listen VMIB Station Number | |
| 64 | Listen VMIB Station Status | |
| 65 | Record VMIB Page Message | |
| 66 | Erase VMIB User Greeting | |
| 67 | Erase VMIB Page Message | |
| 71 | LCD Display Mode (English/Domestic Language) | Keyset |
| 72 | MPB Version Display | Keyset |
| 73 | Background Music | Keyset |
| 74 | Station User Name Registration | |
| 75 | Headset/Speakerphone Mode | Keyset |
| 76 | Headset Ring Mode | Keyset |
| 77 | WTU Station Number Receive | Keyset |
| 78 | Serial No/SW Packages | Keyset with LCD |
| 79 | PC – Phone Lock Key | |
| 7* | USB Always Call Record | |
| ** | HOTDESK Logout | |
| *0 | HOTDESK Login | |
| *1 | Relocation Out | |
| *2 | Relocation IN | |
| *3 | Register Bluetooth | |
| *4 | Bluetooth Usage | |

## 4.1.3 ATTENDANT PROGRAMMING

| NUMBER | ITEM | REMARK |
|---|---|---|
| 0111 | Print SMDR (Station Base) | System Attendant |
| 0112 | Delete SMDR (Station Base) | System Attendant |
| 0113 | Print SMDR (Group Base) | System Attendant |
| 0114 | Delete SMDR (Group Base) | System Attendant |
| 0115 | Display Call Charge | System Attendant |
| 0116 | Abort Printing | System Attendant |
| 0117 | Print Lost Call | System Attendant |
| 0118 | Delete Lost Call | System Attendant |
| 0121 | Print All Summary | System Attendant |
| 0122 | Print All Periodically | System Attendant |
| 0123 | Abort Periodic Printing | System Attendant |
| 0124 | Print ATD Traffic | System Attendant |
| 0125 | Print Call Summary | System Attendant |
| 0126 | Print All Hourly | System Attendant |
| 0127 | Print H/W Usage | System Attendant |
| 0128 | Print CO Summary | System Attendant |
| 0129 | Print CO Hourly | System Attendant |
| 021 | Station COS Down (COS 7) | Attendant |
| 022 | Station COS Restore | Attendant |
| 031 | Authorization Code Cancel | System Attendant |
| 041 | System Date/Time Setting | Attendant |
| 042 | Wake-up Time Registration (One-time /Continuous) | Attendant |
| 043 | Wake-up Time Cancel | System Attendant |
| 044 | LCD Date Mode Change | System Attendant |
| 045 | LCD Time Mode Change | System Attendant |
| 046 | Use Network Time & Date | System Attendant |
| 047 | Monitor Conference Room | Attendant |
| 048 | Forced Delete Conference Room | Attendant |
| 051 | Pre-select MSG Activation | Attendant |
| 052 | Pre-select MSG Deactivation | Attendant |
| 053 | Custom Display Message Program (11-20) | System Attendant |
| 054 | Erase VM MSG | Attendant |
| 06 | Record VMIB System Greeting | System Attendant |

| NUMBER | ITEM | REMARK |
|---|---|---|
| 071 | DND/Call Forward/Pre-selected MSG Cancel | Attendant |
| 072 | Register Station Name | Attendant |
| 073 | Disable CO Outgoing | System Attendant |
| 074 | Automatic Day/Night/Weekend Mode Program | Attendant |
| 075 | ICM BOX BGM Channel select | Attendant |
| 076 | External Page Music -1 Assignment/Cancel | Attendant |
| 079 | Prepaid Call | |
| 07* | LCD Display Language | |
| 091 | Set Call Forward | Attendant |
| 0# | WHTU Subscription | |

## 4.1.4 FLEXIBLE BUTTON PROGRAMMING CODE

| NUMBER | ITEM | REMARK |
|---|---|---|
| 11 | Differential Ring | |
| 21 | Station COS Down | |
| 22 | Station COS Restore | |
| 23 | Walking COS | |
| 31 | Authorization Code Registration | |
| 32 | Authorization Code Change | |
| 41 | Wake-up Time Registration (One-time /Continuous) | |
| 42 | Wake-up Time Cancel | |
| 51 | Pre-selected MSG Activation | |
| 52 | Set Custom Message | |
| 53 | CLIR Key | |
| 54 | Two Way Recording | |
| 55 | Attendant DND | Networking Only |
| 56 | Attendant Camp On (Queue) BTN Assignment | Attendant |
| 57 | Call Log Display | |
| 61 | Record VMIB User Greeting | |
| 64 | Listen VMIB Station Status | |
| 66 | Erase VMIB User Greeting | |
| 71 | LCD Display Mode (English/Domestic Language) | |
| 73 | Background Music | |
| 74 | Station User Name Registration | |
| 75 | Headset/Speakerphone Mode | |
| 76 | Headset Ring Mode | |
| 80 | Account Code Activation | |
| 81 | DID Call Wait | |
| 83 | **[ICM Hold]** BTN Assignment | |
| 84 | **[LOOP]** BTN Assignment | |
| 85 | **[Camp-on]** BTN Assignment | |
| 86 | **[INTRUSION]** BTN Assignment | System Attendant |
| 87 | **[UCD DND]** BTN Assignment | + Hunt Grp No. |
| 89 | Keypad Facility Key | |
| 8* | {ACD STATUS} BTN Assignment | |
| 91 | **[CONF]** BTN Assignment | 2/8 BTN Keyset |
| 92 | **[CALLBK]** BTN Assignment | 2/8 BTN Keyset |
| 93 | **[DND/FWD]** BTN Assignment | 2/8 BTN Keyset |
| 94 | **[FLASH]** BTN Assignment | 2/8 BTN Keyset |
| 95 | **[MUTE]** BTN Assignment | 2/8 BTN Keyset |
| 96 | **[MON]** BTN Assignment | 2/8 BTN Keyset |
| 97 | **[REDIAL]** BTN Assignment | 2/8 BTN Keyset |
| 98 | DID Restriction | |
| 99 | DISA Restriction | |
| 9* | Call Recording via USB | |

# 4.2 ADMIN Programming Index

| MAIN MENU | PGM | ITEM |
|---|---|---|
| PRE-PROGRAMMED DATABASE | 100 | Location Program |
| | 101 | Rack Slot Assignment |
| | 103 | Logical Slot Assignment |
| | 104 | Numbering Plan Type |
| | 105 | Flexible Number Plan – Station Number |
| | 106 | Flexible Number Plan A |
| | 107 | Flexible Number Plan B |
| | 108 | IP Setting |
| | 109 | Flexible Number Plan C |
| | 250 | Hot Desk Attribute |
| STATION BASE PROGRAM | 110 | Station ID |
| | 111 | Station Attribute I |
| | 112 | Station Attribute II |
| | 113 | Station Attribute III |
| | 114 | ISDN Station Attribute |
| | 115 | Flex Button Assignment |
| | 116 | Station COS |
| | 117 | CO Line Group Access |
| | 118 | Internal Page Zone |
| | 119 | Conference Page Zone |
| | 120 | ICM Tenancy Group |
| | 121 | Preset Call Forward |
| | 122 | Hot/Warm Line Selection |
| | 124 | SMDR Account Group |
| | 125 | Copy DSS Button |
| | 126 | Station IP List |
| | 130 | Display Stations by COS |
| | 131 | Display Stations by CO Line Group Access |
| CO LINE BASE PROGRAM | 140 | CO Service Type |
| | 141 | CO Line Attribute I |
| | 142 | CO Line Attribute II |
| | 143 | ISDN CO Line Attribute I |
| | 144 | CO Ring Assignment |
| | 145 | CO Ring Assignment Display |
| | 146 | CO Line Attribute III |
| | 147 | CO CID Attribute |
| SLOT BASE PROGRAM | 155 | Slot Attribute |
| SYSTEM BASE PROGRAM | 160 | System Attribute – I |
| | 161 | System Attribute – II |
| | 162 | ADMIN Password |
| | 163 | Alarm Attributes |
| | 164 | Attendant Assignment |
| | 165 | Auto Attendant VMIB Announce Assignment |
| | 166 | CO-to-CO COS |
| | 167 | DID/DISA Destination |
| | 168 | External Control Contact |
| | 169 | LCD Date/Time/Language Display Mode |
| SYSTEM BASE PROGRAM | 170 | Modem |
| | 171 | Music |
| | 172 | PBX Access Code |
| | 173 | PLA Priority Setting |
| | 174 | RS-232C Port Setting |
| | 175 | Print Port Selection |
| | 176 | Pulse Dial Ratio |
| | 177 | SMDR Attributes |
| | 178 | System Date/Time Setting |
| SYSTEM BASE PROGRAM | 179 | Linked Station Pairs Table |
| | 180 | System Timers – I |

| MAIN MENU | PGM | ITEM |
|---|---|---|
| | 181 | System Timers – II |
| | 182 | System Timers – III |
| | 183 | In Room Indication |
| | 184 | Chime Bell Attribute |
| DCOB | 186 | DCOB System attribute |
| | 187 | DCOB CO Line Attribute |
| STATION GROUP | 190 | Station Group Assign |
| | 191 | Station Group Attribute |
| TABLES | 220 | LCR Attributes |
| | 221 | LCR – Leading Digit Table |
| | 222 | LCR – Digit Modification Table |
| | 223 | LCR Table Initialization |
| | 224 | Toll Exception Table – Allow A (Entry no:01-30) |
| | | Toll Exception Table – Deny A (Entry no:01-30) |
| | | Toll Exception Table – Allow B (Entry no:01-30) |
| | | Toll Exception Table – Deny B (Entry no:01-30) |
| | 225 | Canned Toll Table –Allow (Entry no:01-10) |
| | | Canned Toll Table –Deny (Entry no:01-10) |
| | 226 | Emergency Code Table |
| | 227 | Authorization Code Table |
| | 228 | Customer Call Routing |
| | 229 | Executive/Secretary Table |
| | 231 | Flexible DID Table |
| | 232 | System Speed Zone |
| | 233 | Weekly Time Table |
| | 234 | Voice Mail Dialing Table |
| | 236 | Mobile Extension |
| | 237 | Incoming CLI destination table |
| | 204 | Local Code Table |
| | 205 | Enblock Prefix Table |
| NETWORKING | 320 | Networking Basic Attribute |
| | 321 | Networking Supplementary Attribute |
| | 322 | Networking CO Line Attribute |
| | 324 | Networking Routing Table |
| VOIB | 340 | VOIB IP Setting |
| | 341 | GK Setting (Not Supported yet ) |
| RSG | 380 | VOIB Slot For RSG/IP |
| | 381 | RSG/IP No Assign |
| | 382 | RSG/IP Attribute |
| | 383 | RSG Attribute 1 |
| | 384 | RSG Attribute 2 |
| | 385 | RSG Alarm Attribute |
| | 386 | IP Phone Attribute |
| | 390 | RSG DKT RX GAIN |
| | 391 | RSG DKT TX GAIN |
| | 392 | RSG SLT RX GAIN |
| | 393 | RSG SLT TX GAIN |
| | 394 | RSG LCO RX GAIN |
| | 395 | RSG LCO TX GAIN |
| | 396 | IP Phone RX GAIN |
| | 397 | IP Phone TX GAIN |
| SMS ATTRIBUTE | 290 | SMS Attribute |
| | 291 | SMS Setting |
| | 292 | SMS CO Attribute |
| NATION SPECIFIC | 400 | DTIB Rx Gain Control |
| | 401 | SLIB Rx Gain Control |
| | 404 | ACOB Rx Gain Control |
| | 406 | DCOB Rx Gain Control |
| | 407 | VMIB Rx Gain Control |
| | 408 | DTMF Receiver Rx Gain Control |
| | 409 | EXT Page Rx Gain Control |
| | 410 | CPTU Rx Gain Control |

| MAIN MENU | PGM | ITEM |
|---|---|---|
| | 411 | Modem Rx Gain Control |
| | 412 | Short SLIB Gain Control |
| | 413 | Long SLIB Gain Control |
| | 414 | Far SLIB Gain Control |
| | 415 | Short ACO Gain Control |
| | 416 | Long ACO Gain Control |
| | 420 | System Tone Frequency |
| | 421 | Differential Ring Frequency |
| | 422 | Distinct CO Ring Frequency |
| | 423 | ACNR Tone Cadence |
| | 424 | DTIB Rx From ACO Gain Control |
| | 425 | Singular Table (Korea Only) |
| INITIALIZATION (DB INIT) | 450 | Initialization |
| | 452 | Init By Version |
| PRINT DATABASE | 451 | Print Port Database |

# 4.3 Default Values

## 4.3.1 LOCATION PROGRAM

| PGM | FLEX | ITEM | DEFAULT | REMARK |
|---|---|---|---|---|
| 100 | 1 | Nation Code | 82 | Max 4 digits |
| | 2 | Customer Site Name | | Max 24 digits |

## 4.3.2 RACK SLOT ASSIGNMENT

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 101 | - | Slot Assignment | Refer to Note 2 | Refer to Note 1 | In case of PRIB assignment, it is possible to program logical port number. |

***NOTE1***—*If the DIP switch of the manual board detection (Pole 8 of DIP Switch, ipLDK-100/300/300E; Pole 4 of DIP Switch, ipLDK-20) is ON, system will detect the installed board type automatically. If the Pole 8 (4 in ipLDK-20) of DIP switch is OFF, the board type code must be entered at each slot. After manually setting Rack Slot assignment, the user should reset the system manually.*
***NOTE2***–*Board Type Code Table:*

**Board ID for ipLDK-100/300/300E**

| | CODE | COL | CODE | STA & COL | CODE | Etc | CODE |
|---|---|---|---|---|---|---|---|
| DTIB12 | 11 | PRIB | 31 | STIB | 51 | VMIB | 61 |
| DTIB24 | 12 | BRIB | 32 | | | MISB | 71 |
| SLIB6 | 13 | LCOB4 | 33 | | | | |
| SLIB12 | 14 | LCOB8 | 34 | | | | |
| WTIB | 15 | DIDB | 35 | | | | |
| SLIB2E | 16 | BWDIDB | 36 | | | | |
| DSIB | 18 | TLIB | 37 | | | | |
| SLIBC | 19 | EMIB | 38 | | | | |
| CSLIB12E | 21 | AC15 | 39 | | | | |
| | | DCOB | 40 | | | | |
| | | VOIB | 41 | | | | |
| | | NPRIB | 42 (ipLDK-100) | | | | |
| | | NBRIB(8) | 43 (ipLDK-100) | | | | |
| | | NBRIB(4) | 44 (ipLDK-100) | | | | |
| | | CLCOB8 | 45 | | | | |
| | | RDIB | 46 | | | | |
| | | EMIB8 | 47 | | | | |
| | | CLCOB4 | 49 | | | | |

**Board ID for ipLDK-20**

| STA | CODE | COL | CODE | STA & COL | CODE | Etc | CODE |
|---|---|---|---|---|---|---|---|
| DTIB4 | 11 | LCOB2 | 33 | STIB2 | 52 | VMIB | 61 |
| DTIB8 | 12 | LCOB4 | 34 | STIB1 | 53 | AAFB | 62 |
| SLIB4 | 13 | CBIB | 54 | | | VMIBE | 64 |
| SLIB8 | 14 | | | | | AAFBE | 65 |
| WTIB | 15 | | | | | | |

***NOTE***—*ipLDK-20 has WDIB. WDIB is combination of DTIB4 and WTIB.*
*User should assign DTIB4 by code '11' and WTIB by code '15' manually.*

## 4.3.3 WTIB PORT NUMBER ASSIGNMENT

| PGM | FLEX | ITEM | RANGE | | | DEFAULT | REMARK |
|---|---|---|---|---|---|---|---|
| | | | ipLDK-300/300E | ipLDK-100 | ipLDK-20 | | |
| 102 | - | WTIB Port Number Assignment | 008 – 192 (Multiple of 8) | 08-80 (Multiple of 8) | 00-16 | 8 | When ipLDK-100 has one rack: 08-40 |

## 4.3.4 LOGICAL SLOT ASSIGNMENT

| PGM | FLEX | ITEM | DEFAULT | REMARK |
|---|---|---|---|---|
| 103 | 1 | COL Board | Refer to Note | |
| | 2 | STA Board | Refer to Note | |
| | 3 | VMIB | Not Assigned | |

***NOTE**—If the DIP switch of the manual board detection (Pole 8 of DIP Switch, ipLDK-100/300/300E; Pole 4 of DIP DIP Switch) is ON, the system will detect the logical slot assign in sequence with increasing order automatically. If the Pole 8 of DIP Switch (4 in ipLDK-20) is OFF, the logical slot assignment must be entered at each board type. After manually setting logical slot assignment, the user should reset the system manually.*

## 4.3.5 NUMBERING PLAN TYPE

| PGM | ITEM | STA RANGE | | | | DEFAULT | REMARK |
|---|---|---|---|---|---|---|---|
| | | ipLDK-20 | ipLDK-300E | ipLDK-300 | ipLDK-100 | | |
| 104 | Number Set Type 1 | 10 – 37 | 1000 – 1599 | 100 – 399 | 100 – 227 | Type 1 | As the basic type, the 1st digit of station number should be 1 – 4. |
| | Number Set Type 2 | 10 – 37 | 1000 – 1599 | 100 – 399 | 100 – 227 | | The station number can be changed within 799. |
| | Number Set Type 3 | 10 – 37 | 1000 – 1599 | 100 – 399 | 100 – 227 | | |
| | Number Set Type 4 | 700 – 727 | 7000 – 7599 | 700 – 999 | 700 – 827 | | |
| | Number Set Type 5 | 200 – 227 | 2000 – 2599 | 200 – 499 | 200 – 327 | | |
| | Number Set Type 6 | 10 – 37 | 10 – 79 | 10 – 79 | 10 – 79 | | Max Station Ports: 60<br>Stations above Max ports will be displayed "***". |
| | Number Set Type 7 | 100 – 127 | 1000 – 1299 | 100 – 299 | 100 – 227 | | Max Station Ports: 200<br>Stations above Max ports will be displayed "***". |
| | Number Set Type 8 | 10 – 37 | 1000 – 1599 | 100 – 399 | 100 – 227 | | The station number can be changed within 999. |

## 4.3.6 FLEXIBLE NUMBERING PLAN

| PGM | FLEX | FIELD | NUMBER SET1 | NUMBER SET2 | NUMBER SET3 | NUMBER SET4 | NUMBER SET5 | NUMBER SET6 | NUMBER SET7 | NUMBER SET8 | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 105 | - | Intercom Call | 1000 – 1599 | 1000 – 1599 | 100 – 1599 | 7000 – 7599 | 2000 – 2599 | 10 – 79 | 1000 – 1299 | 1000 – 1599 | ipLDK-300E |
| | | | 100 – 399 | 100 – 399 (100 – 799) | 100 – 399 | 700 – 999 | 200 – 499 | 10 – 79 | 100 – 299 | 100 – 399 (100 – 999) | ipLDK-300 |
| | | | 100 -227 | 100 – 227 (100 – 799) | 100 – 227 | 700 – 827 | 200 – 327 | 10 – 79 | 100 – 227 | 100 – 227 (100 – 999) | ipLDK-100 |
| | | | 10 – 35 | 10 – 35 (10-79) | 10 – 35 | 700-725 | 200 – 225 | 21-45 | 100 – 125 | 10 – 35 (10-99) | ipLDK-20 |
| 106 | 1 | Group Pilot Number | 620 – 667 | *620 - *667 | 620 – 667 | 620 – 667 | 620 – 667 | *620 - *667 | 620 – 667 | *620 - *667 | ipLDK-300E |
| | | | 620 – 634 | *620 - *634 | 620 – 634 | 620 – 634 | 620 – 634 | *620 - *634 | 620 – 634 | *620 - *634 | ipLDK-100 |
| | | | 620 – 629 | *620 - *629 | 620 – 629 | 620-629 | 620 – 629 | *620 - *629 | 620 – 629 | *620 - *629 | ipLDK-20 |
| | 2 | Internal Page Zone | 501 – 535 | *501 - *535 | #01 - #35 | #01 - #35 | #01 - #35 | *501 - *535 | 401 – 419 | *501 - *535 | ipLDK-300E |
| | | | 501 – 515 | *501 - *515 | #01 - #15 | #01 - #15 | #01 - #15 | *501 - *515 | 401 – 415 | *501 - *515 | ipLDK-100 |
| | | | 501 – 510 | *501 – *510 | #01-#10 | #01-#10 | #01-#10 | *501 – *510 | 401 – 410 | *501 – *510 | ipLDK-20 |
| | 3 | Internal All Call Page | 543 | *543 | #5 | #7 | #5 | *543 | 43 | *543 | |
| | 4 | Meet Me Page | 544 | *544 | ## | ## | ## | *544 | 44 | *544 | |
| | 5 | External Page Zone 1 | 545 | *545 | #6 | #41 | #6 | *545 | 45 | *545 | |
| | 6 | External Page Zone 2 | 546 | *546 | #7 | #42 | #7 | *546 | 46 | *546 | Not in ipLDK-20 |
| | 7 | External Page Zone 3 | 547 | *547 | #8 | #43 | #8 | *547 | 47 | *547 | Not in ipLDK-20 |
| | 8 | External All Call Page | 548 | *548 | #9 | #5 | #9 | *548 | 48 | *548 | Not in ipLDK-20 |
| | 9 | All Call Page (Int & Ext) | 549 | *549 | #00 | #6 | #00 | *549 | 49 | *549 | |
| | 10 | SMDR Account Code Enter | 550 | *550 | 550 | 550 | 50 | *550 | 50 | *550 | SLT |
| | 11 | Flash Command to CO Line | 551 | *551 | 551 | 551 | 51 | *551 | 51 | *551 | SLT |
| | 12 | Last Number Redial | 552 | *552 | 552 | 552 | 52 | *552 | 52 | *552 | SLT |
| | 13 | DND (Toggle On/Off) | 553 | *553 | 553 | 553 | 53 | *553 | 53 | *553 | SLT |
| | 14 | Call Forward | 554 | *554 | 554 | 554 | 54 | *554 | 54 | *554 | SLT |
| | 15 | Speed Dial Programming | 555 | *555 | 555 | *40 | 55 | *555 | 55 | *555 | SLT |
| | 16 | Message Wait/Callback Enable | 556 | *556 | 556 | *66 | 56 | *556 | 56 | *556 | |

| PGM | FLEX | FIELD | NUMBER SET1 | NUMBER SET2 | NUMBER SET3 | NUMBER SET4 | NUMBER SET5 | NUMBER SET6 | NUMBER SET7 | NUMBER SET8 | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 106 | 17 | Message Wait/Callback Return | 557 | *557 | 557 | *67 | 57 | *557 | 57 | *557 | SLT |
| | 18 | Speed Dial Access | 558 | *558 | 558 | *7 | 58 | *558 | 58 | *558 | SLT |
| | 19 | Cancel DND/FWD/Pre-MSG | 559 | *559 | 559 | 559 | 59 | *559 | 59 | *559 | SLT |
| | 20 | System Hold | 560 | *560 | 560 | 560 | 690 | *560 | 30 | *560 | SLT |
| | 21 | [RESERVED] | 561 | *561 | 561 | 561 | 691 | *561 | … | *561 | |
| | 22 | [RESERVED] | 562 | *562 | 562 | 562 | 692 | *562 | … | *562 | |
| | 23 | Programming Mode Enter Code | 563 | *563 | 563 | 563 | 693 | *3 | 33 | *3 | SLT |
| | 24 | ACD Reroute | 564 | *564 | 564 | 564 | 694 | *4 | 34 | *4 | |
| 107 | 1 | Alarm Reset | 565 | *565 | 565 | *565 | 695 | *565 | 35 | *565 | |
| | 2 | Group Call Pickup | 566 | *566 | ** | *1 | ** | *566 | 36 | *566 | |
| | 3 | UCD DND | 568 | *568 | 568 | 568 | 698 | *568 | 68 | *568 | |
| | 4 | Night Answer | 569 | *569 | 577 | 2 | 699 | *569 | 69 | *569 | |
| | 5 | Call Parking Locations | 601 – 619 | *601 -* 619 | 601 – 619 | 601-619 | 601 – 619 | *601 -* 619 | 601 – 619 | *601 -* 619 | ipLDK-300/300E |
| | | | 601 – 610 | *601 -* 610 | 601 – 610 | 601-610 | 601 – 610 | *601 -* 610 | 601 – 610 | *601 -* 610 | ipLDK-100 |
| | | | 601 – 608 | *601 -* 608 | 601 – 608 | 601 – 608 | 601 – 608 | *601 -* 608 | 601 – 608 | *601 -* 608 | ipLDK-20 |
| | 6 | Direct Call Pickup | 7 | *7 | *7 | *42 | 7 | *7 | 7 | *7 | |
| | 7 | CO Line Group Access | 801-872 | 801-872 | 801-872 | 401-472 | 801-872 | 801-872 | 801-872 | #801-#872 | ipLDK-300/300E |
| | | | 801-824 | 801-824 | 801-824 | 401-424 | 801-824 | 801-824 | 801-824 | #801-#824 | ipLDK-100 |
| | | | 801-808 | 801-808 | 801-808 | 401-408 | 801-808 | 801-808 | 801-808 | #801-#808 | ipLDK-20 |
| | 8 | Individual CO Access | 88001-88400 | 88001-88400 | 88001-88400 | 48001-48400 | 88001-88400 | 88001-88400 | 88001-88400 | #88001-#88400 | ipLDK-300E |
| | | | 88001-88200 | 88001-88200 | 88001-88200 | 48001-48200 | 88001-88200 | 88001-88200 | 88001-88200 | #88001-#88200 | ipLDK-300 |
| | | | 8801-8840 | 8801-8840 | 8801-8840 | 4801-4840 | 8801-8840 | 8801-8840 | 8801-8840 | #8801-#8840 | ipLDK-100 |
| | | | 8801-8816 | 8801-8816 | 8801-8816 | 4801-4816 | 8801-8816 | 8801-8816 | 8801-8816 | #8801-#8816 | IP-LDK20 |
| | 9 | Tie Routing Access | 8901 | 8901 | 8901 | 4901 | 89 | 8901 | 8901 | #401 | |
| | 10 | Retrieve Held CO Line | 8* | 8* | 8* | 4* | 8* | 8* | 8* | #8* | |
| | 11 | Retrieve Held Individual CO Line | 8#xxx | 8#xxx | 8#xxx | 4#xxx | 8#xxx | 8#xxx | 8#xxx | #8#xxx | ipLDK-300/300E |
| | | | 8#xx | 8#xx | 8#xx | 4#xx | 8#xx | 8#xx | 8#xx | #8#xx | ipLDK-100/20 |
| | 12 | Access CO Line In the 1st available CO Line Group | 9 | 9 | 9 | 1 | 0 | 9 | 9 | 0 | |

| PGM | FLEX | FIELD | NUMBER SET1 | NUMBER SET2 | NUMBER SET3 | NUMBER SET4 | NUMBER SET5 | NUMBER SET6 | NUMBER SET7 | NUMBER SET8 | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 107 | 13 | Attendant Call | 0 | 0 | 0 | 0 | 9 | 0 | 0 | #9 | |
| | 14 | 1st Door Open | #*1 | #*1 | #*1 | #*1 | #*1 | #*1 | #*1 | #*1 | |
| | 15 | 2nd Door Open | #*2 | #*2 | #*2 | #*2 | #*2 | #*2 | #*2 | #*2 | |
| | 16 | 3rd Door Open | #*3 | #*3 | #*3 | #*3 | #*3 | #*3 | #*3 | #*3 | Not in ipLDK-20 |
| | 17 | 4th Door Open | #*4 | #*4 | #*4 | #*4 | #*4 | #*4 | #*4 | #*4 | Not in ipLDK-20 |
| | 18 | 5th Door Open | #*5 | #*5 | #*5 | #*5 | #*5 | #*5 | #*5 | #*5 | Not in ipLDK-20 |
| | 19 | 6th Door Open | #*6 | #*6 | #*6 | #*6 | #*6 | #*6 | #*6 | #*6 | Not in ipLDK-20 |
| | 20 | 7th Door Open | #*7 | #*7 | #*7 | #*7 | #*7 | #*7 | #*7 | #*7 | ipLDK-300/300E |
| | | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | ipLDK-100/20 |
| | 21 | VM Message Waiting Enable | *8 | *8 | *8 | *8 | *8 | *8 | *8 | *8 | |
| | 22 | VM Message Waiting Disable | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | |
| 109 | 1 | MCID Request | *0 | *0 | *0 | *0 | *0 | *0 | *0 | *0 | |
| | 2 | RSG Door Open 1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | |
| | 3 | RSG Door Open 2 | *2 | *2 | *2 | *2 | *2 | *2 | *2 | *2 | |
| | 4 | Conference Room | 57 | *57 | *57 | 57 | *57 | *57 | *57 | *57 | |
| | 5 | SLT Conference Page Join | 58 | *58 | *58 | 58 | *58 | *58 | *58 | *58 | |
| | 6 | Unsupervised Conf Timer Extend | ## | ## | *## | *## | *## | ## | ## | ## | |
| | 7 | Remote MEX control | #1 | #1 | *#1 | *#1 | *#1 | #1 | #1 | #1 | |

## 4.3.7 IP SETTING

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 108 | 1 | IP Name | Max 15 | | |
| | 2 | Server IP Address | 12 Digits | 192.168.1.1 | Skip: # |
| | 3 | CLI IP Address | 12 Digits | | |
| | 4 | Gateway Address | 12 Digits | | |
| | 5 | Subnet Mask | 12 Digits | 255.255.255.0 | |

## 4.3.8 STATION ID ASSIGNMENT

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 110 | 1 | ID | 01-16 | 01-11 | |
| | 2 | DSS/DLS MAP – Associate STA | STA # | STA # | |

## 4.3.9 STATION ATTRIBUTE I/II/III

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 111 | 1 | Auto Speaker Selection | ON / OFF | ON | If this value is set to ON, Station user can access a CO line or make a DSS call by pressing appropriate {CO} or {DSS} button without lifting handset or pressing the **[MON]** button. |
| | 2 | Call Forward | ON / OFF | ON | If this value is set to ON, an incoming call can be forwarded to the other destination. |
| | 3 | DND | ON / OFF | ON | If this value is set to ON, an incoming call can be denied. |
| | 4 | Data Line Security | ON / OFF | OFF | If this value is set to ON, override and camp-on from other stations are prohibited when this station is busy. |
| | 5 | Howling Tone to SLT | ON / OFF | ON | If this value is set to ON, System gives howling tone to SLT.<br>In SLT, user keep off-hook state continually, system gives error tone first, then off-hook state still continue, system gives very noisy error tone. This noisy error tone is howling tone. |
| | 6 | ICM Box Signaling | ON / OFF | OFF | If this value is set to ON, This station can receive intercom box signal. |
| | 7 | No Touch Answer | ON / OFF | ON | If this value is set to ON, the station can be responded to the transferred CO call automatically when station mode is H/P. |
| | 8 | Page Access | ON / OFF | ON | If this value is set to ON, This station can page to other station. |
| | 9 | Ring Type | 0 – 4 | 0 | If this value is not 0, this ring type is heard to called party station of intercom call. |
| | 10 | Speaker Ring | 1:Speaker<br>2: Headset<br>3:BOTH | Speaker-Phone | This feature determines the ringing path whether Speaker or Headset and even both. |
| | 11 | Speakerphone | ON/OFF | ON | If this value is set to ON, Speakerphone can be used. |
| | 12 | VMIB Slot | | 0 | |
| | 13 | ICM Group | 1 – 5 | 1 | This feature selects intercom Tenancy Group, which this station belongs to. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 14 | Error Tone for TAD | ON / OFF | OFF | If this value is set to ON, and TAD is used in SLT port, when the caller hangs up, busy tone will be provided to TAD instead of error tone. |
| | 15 | SLT Flash Drop | 0 – 3 | DISABLE | 0 : Disable – Flash detected, but Line Drop is disable. (Default) (already existing feature)<br>1 : Flash Drop – Flash detected and Line Drop is disconnected. (already existing feature)<br>2 : Flash Ignore – Ignore Hook Flash in any cases. The line is disconnected only if user goes ON-Hook.<br>3 : Hold Release – Drop the holding line if system detects Flash and then On-Hook. |
| | 16 | Loop LCR Account Code | ON / OFF | OFF | If this value is set to ON, station user must enter Account Code to use Loop LCR. |
| | 17 | VMIB Message Type | FIFO/LIFO | LIFO | In FIFO state, the first recorded VMIB message can play. Oppositely in LIFO state, the latest message plays. |
| | 18 | Off-net Call Forward | EN/DIS | ENABLE | If this value is set to ON, Off-net call forward can be used. |
| | 19 | Forced Hands-free | ON / OFF | OFF | The privilege to make the called party to hands-free mode forcedly |
| | 20 | CIDSLT CAS GAIN | 00-20 | 5 | CAS gain for CID SLT |
| | 21 | CIDSLT FSK GAIN | 00-20 | 5 | FSK gain for CID SLT |
| | 22 | CALLER Voice Over | ON/OFF | OFF | Facility to make Voice-Over to busy station. |
| | 23 | SIP User ID Table bin | 00-32 | 00 | UID table index for SIP outgoing call VOIB make "From" Header if this value is<br>00 : Use COLP<br>01~32 : Use SIP UID (PGM 501 – 1) |
| | 24 | Listen Redial DTMF | ON/OFF | ON | If this value is set to ON, DTMF tone is heard to the station user while redial. |
| 112 | 1 | CO Warning Tone | ON / OFF | OFF | In case of restricting outgoing CO call time, if this value is set to ON, the station user receives warning tone during CO call after the timer expires (ADMIN 180-FLEX 22). |
| | 2 | Automatic Hold | ON / OFF | OFF | While seizing a CO line, the station user seizes another CO line by pressing the {CO} button. If this value is set to ON, the previous seized CO line goes on hold automatically. In case of Attendant , default value is ON. |
| | 3 | CO Call Time Restriction | ON / OFF | OFF | If this flag is set to ON, station's outgoing CO call may be disconnected when Call Cut –Off Timer (PGM113-FLEX12) expires. |
| | 4 | Ind CO Line Access | EN/DIS | ENABLE | If this value is set to ENABLE, the station user can access individual CO line by dialing Individual CO access code(ADMIN 107-FLEX 8) |
| | 5 | CO Line Queuing | EN/DIS | ENABLE | When a user of station receives a busy signal during an attempt to access a CO line, the user may request a call back (queue) when the CO Line is available. If this value is set to ENABLE, the user gets the recalling from the CO Line when it's available. |
| | 6 | CO PGM | EN/DIS | DISABLE | If this value is set to ENABLE, the station user can program CO button at its Flexible button. |
| | 7 | PLA | EN/DIS | ENABLE | If this value is set to ENABLE, the station user can answer calls according to the priority (ADMIN 173). |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 8 | Prepaid Call | ON / OFF | OFF | If this value is set to ON, the station user can use Prepaid Call feature (ADMIN 180-FLEX 16). |
| | 9 | Speed Dial Access | EN/DIS | ENABLE | If this value is set to ENABLE, the station user can use system speed dial call. |
| | 10 | Two Way Record | ON / OFF | OFF | If this value is set to ON, the station user can record the incoming and outgoing voice during conversation. |
| | 11 | Fax Mode | ON / OFF | OFF | If this value is set to ON, single ring is provided and Attendant recall is not operated. |
| | 12 | OFFNET Call Mode | EXT/ALL | ALL | If this value is set to EXT, the station user can only forward CO call to Off-net(ex mobile phone). Otherwise both CO call and ICM call can be forwarded to Off-net. |
| | 13 | UCD Group Service | ON / OFF | OFF | This feature is used when a station gets DID/DISA call.<br>If this value is set to ON, the UCD Group, which the station belongs to, gets the incoming call and if this value is set to OFF, the station gets the incoming call directly whether the station is busy or not. |
| | 14 | Ring Group Service | ON / OFF | OFF | This feature is used when a station in Ring Group gets a DID/DISA call.<br>If this value is set to ON, the Ring Group, which the station belongs to, gets the incoming call and if this value is set to OFF, the station gets the incoming call directly. |
| | 15 | Stop Camp On Tone | EN/DIS | DISABLE | If this value is set to ENABLE, Camp on Tone is not heard. |
| | 16 | Line Length | SHORT / LONG / FAR | SHORT (Short:0km, Long:0~3km, Far:3~7.5km) | This feature is used to distinguish the line length when the distance between the stations and the station boards is too variable. (SAF only) |
| | 17 | MSG SCROLL SPEED | 0 – 7 | 3 | This value means the scroll speed of SMS or broadcasting notice message. (Only for LKD-30DH) |
| | 18 | BLOCK BACK CALL for SLT | ON/OFF | OFF | If this value is set to ON, SLT recalling is blocked after pressing **[FLASH]** button. |
| | 19 | I-TIME RST | ON/OFF | OFF | If this value is set to ON, the conversation time of incoming CO call is limited.<br>After Call Cut –Off Timer (PGM113-FLEX12) is expired, the call is forced to disconnected. |
| | 20 | STA Account | ON/OFF | OFF | If this value is set to ON, an authorization code is required when she accesses CO line. |
| | 21 | CID Type 2 Service<br><br>RESERVED | ON/OFF | OFF | If this value is set to ON, CLI type 2 is serviced for CID SLT. |
| | 22 | Door Open | ENABLE /DISABLE | DISABLE | If this value is set to ON, the station can open the door using the door open code. |
| | 23 | Dummy Station | ON/OFF | OFF | If this value is set to ON, a hot-desk agent can login at the dummy station. |
| | 24 | Emergency Supervisor | ON/OFF | OFF | If this value is set to ON, this station can make Emergency Intrusion call to other station. |
| 113 | 1 | ADMIN | EN/DIS | DISABLE | If this value is set to ENABLE, the assigned station users can program ADMIN Database. This feature is only available at DKTU.<br>(STA 100 : Enabled as default) |
| | 2 | VMIB Access | EN/DIS | DISABLE | If this value is set to ENABLE, the station user can use VMIB. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 3 | Group Listening | EN/DIS | DISABLE | If this value is set to ENABLE, the station user can use group listening. While you are talking on handset, by pressing the **[MON]** button, other people around you may hear the conversation through the speaker. Although the voice of other people is not sent by Mic. |
| | 4 | Override Privilege | EN/DIS | DISABLE | If this value is set to ENABLE, the station user can override CO Call. |
| | 5 | SMDR Hidden Dialed Digits | EN/DIS | DISABLE | If this value is set to ENABLE, Dialed number of CO Call is not showed on SMDR record. |
| | 6 | Voice Over | EN/DIS | DISABLE | If this value is set to ENABLE, the station user can talk alternately a call to the other call. |
| | 7 | Warm Line | HOT/WARM | WARM | If this value is set to HOT, the station user can use Hot Line. (Refer to PGM122). Otherwise in Warm Line state, Warm Line Timer starts when the user lifts handset or presses the [MON] button. |
| | 8 | VMIB MSG Retrieve Password | ON/OFF | OFF | If this value is set to ON, the station user must enter password to retrieve VMIB Message. |
| | 9 | VMIB MSG Retrieve Date/Time | ON/OFF | ON | If this value is set to ON, Date and time will be heard when VMIB Message is retrieved. |
| | 10 | Alarm Attribute | ON/OFF | OFF | If this value is set to ON, the station gets the alarm signal. |
| | 11 | Mute Ring Service | ON/OFF | OFF | If this value is set to ON, the station can get mute ring. |
| | 12 | Call Cut Off timer | 0-99 | 0 | Disable<br>(Minutes based) |
| | 13 | Barge In mode | 0-2 | 0 | 1-Monitor Mode<br>2-Speech mode |
| | 14 | Auto Forward to VMIB | ON/OFF | ON | |
| | 15 | Station Port Block | Enable/Disable | Disable | If this value is set to ON, station is blocked so it's impossible to use that station. |
| | 16 | P-MSG DND | ON/OFF | OFF | If this value is set to ON, then when Pre-selected Message feature is set at this station, CO and ICM ring is treated just like DND feature. |

## 4.3.10 ISDN STATION ATTRIBUTE

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 114 | 1 | CLIP LCD Display | ON / OFF | ON | If this value is set to ON, the CLI is displayed on the station LCD. |
| | 2 | COLP LCD Display | ON / OFF | OFF | If this value is set to ON, the connected party's CLI is displayed on station LCD. |
| | 3 | CLI / REDIRECT | CLI / REDIRECT | CLI | If this value is set to RED, the forwarding station no is sent. Otherwise, the original CLI is sent when using networking forward feature. |
| | 4 | CLI MSG Wait | ON / OFF | OFF | If this value is set to ON, the station can receive CLI message from CO Incoming call, when the station doesn't answer. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 5 | EXT or CO ATD<br><br>RESERVED | ATD/EXT | EXT | If this value is set to ATD, CO ATD code (ADMIN 200) is used to outgoing CLI information. Otherwise, station number is used as CLI information |
| | 6 | Keypad Facility<br><br>RESERVED | KEYPAG / DTMF | DTMF | If this value is set to KEYPAD, ISDN station sends digit in keypad facility after connected. Otherwise DTMF is used. |
| | 7 | Long / Short<br><br>RESERVED | LONG / SHORT | SHORT | If this value is set to LONG, ISDN station acts in LONG passive mode. |
| | 8 | CPN Type<br><br>RESERVED | 0-2 | 0(Not used) | This value set CPN IE type of SETUP message (If this value is set to 0, all S0 stations of the S port get the incoming call. In case of 1 & 2, only one specific station gets the call). |
| | 9 | S0 Sub-address<br><br>RESERVED | 0-2 | 0(Not used) | This value indicates how the sub-address is used in SETUP message. If this value is set to 0, station sub-address not used. Else if set to 1, sub-address is filled in the CPN field of SETUP message. Otherwise, sub-address is filled in the Called Party Sub-address Number (CPSN) field of SETUP message. |
| | 10 | Reserved | - | - | - |
| | 11 | CLI Name Display | ON / OFF | OFF | If this field is ON, the system checks whether the received CLI is matched with the speed dial data or not. If it is matched, the speed dial name is displayed. |
| | 12 | ISDN CLI Station Number<br><br>RESERVED | Max 4 digits | | This value is used as outgoing CLI When outgoing CLI is active and CLI type is EXT(Station) |
| | 13 | Progress Indication<br><br>RESERVED | ON / OFF | OFF | If this value is set to ON, the Progress Indicator can notice non-ISDN device. |
| | 14 | ISDN CLIR<br><br>RESERVED | ON / OFF | OFF | If this value is set to ON, the CLI information is restricted by PX. |
| | 15 | ISDN COLR<br><br>RESERVED | ON / OFF | OFF | If this value is set to ON, the connect party's CLI information is restricted by PX. |
| | 16 | DID Restriction | ON / OFF | OFF | If this value is set to ON, the station is restricted to receive the DID incoming call. |
| | 17 | DID Call Wait | ON/OFF | OFF | If this value is set to ON, when the station is busy, another DID call could be waiting. |
| | 18 | CLI Type | LONG/SRT | SHORT | This value selects CLI type. |
| | 19 | Long Station CLI | Max 12 digits | Logical STA Number | If outgoing CLI is activated and CLI type is EXT (Station), this value is used as outgoing CLI. |
| | 20 | MSN Call Wait | ON/OFF | OFF | If this value is set to ON, she receives a call waiting via MSN. |
| | 21 | LONG CLI 1 | Max 16 digits | | If CLI type of outgoing CO line is set to 1, Long CLI 1 is sent. |
| | 22 | LONG CLI 2 | Max 16 digits | | If CLI type of outgoing CO line is set to 2, Long CLI 2 is sent. |

## 4.3.11 FLEXIBLE BUTTON ASSIGNMENT

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 115 | 01-24 | Flex. Buttons Assignment | FLEX 01-44 | | Each Flexible Button in a station can be assigned as desired. |
| | | 01: User Key | - | | User can program by button programming procedure (empty). |
| | | 02: {CO} Button | 01-16 (ipLDK-20)<br>01-40 (ipLDK-100)<br>001-200 (ipLDK-300)<br>001-400 (ipLDK-300E) | | CO Line |
| | | 03: {CO Line Group} Button | 01-08 (ipLDK-20)<br>01-24 (ipLDK-100)<br>01-72 (ipLDK-300/300E) | | CO Line Group |
| | | 04: {LOOP} Button | - | | |
| | | 05: {STA xxx} Button | STA No. | | Station No. |
| | | 06: STA PGM Button | 11 – 99 | | Station Programming Code |
| | | 07: {STA SPD xxx} Button | STA SPD Bin No. | | Speed Bin |
| | | 08: {SYS SPD xxxx} Button | SYS SPD Bin No. | | System Speed Bin |
| | | 09: FLEX NUM | Num. Plan Code | | Num. Plan Code |
| | | 10: Networking DSS Button | Networking No. | | Networking DSS Number |
| | | 11: MSN Button | MSN No. | | MSN No. |

## 4.3.12 STATION BASE PROGRAM

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 116 | 1 | Station COS – Day | 1 – 11 | 1 | Day Class-Of-Service |
| | 2 | Station COS – Night | 1 – 11 | 1 | Night/Weekend Class-Of-Service |
| 117 | 1 | CO Line Group | | 01-08 (ipLDK-20)<br>01-24 (ipLDK-100/300/300E) | CO line Group (Toggle)<br>01-08, ipLDK-20<br>01-24, ipLDK-100/ 300/300E |
| | 2 | | | 25-72(ipLDK-300/300E) | CO line Group (Toggle)<br>25-48, ipLDK-300/300E |
| | 3 | | | 49-72(ipLDK-300/300E) | CO line Group (Toggle)<br>49-72 : ipLDK-300/300E |
| 118 | 1 | Internal Page Zone Access | 01-05 (ipLDK-20)<br>01-10 (ipLDK-100)<br>01-24 (ipLDK-300/300E) | 1 | Each station can be assigned to internal page zone (Toggle). |
| | 2 | | 25-30 (ipLDK-300/300E) | | Each station can be assigned to internal page zone (Toggle). |
| 119 | 1-5 | Conference Page Zone Access | Zone 06 – 10 (ipLDK-20)<br>Zone 11 – 15 (ipLDK-100)<br>Zone 31 – 35 (ipLDK-300/300E) | | Each station can be assigned to conference page zone. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 120 | | ICM Tenancy Group Number | | | Each Intercom Tenancy Group can be operated independently and the stations in the group can be assigned an individual CO Line Group to use. Each group can be assigned with attendant and can be programmed to allow or deny calls to other groups. |
| | 1 | ICM Tenancy Group Attendant | STA No. | - | Each ICM group may have one attendant.<br>Day/Night Mode of ICM Group is set by ICM Group attendant. |
| | 2 | ICM Tenancy Access Group | 1 – 5 (ipLDK-20/100)<br>01- 15 (ipLDK-300/300E) | GROUP 1 | Each group can be programmed to allow or deny calls to other groups. |
| 121 | | ICM Preset Call Forward | | - | When this feature is programmed, if the station does not answer the incoming CO call within Preset Call Forward timer, then this call is forwarded to preset destination.<br>No station is assigned as default. |
| 122 | | IDLE LINE SELECTION | | - | This feature assigns the destination of Hot Line and Warm Line. |
| | | 1: Flex Button | 01 – 44 | - | To activate a feature on a flex button as if pressed. |
| | | 2: CO Line | 01-16 (ipLDK-20)<br>01-40 (ipLDK-100)<br>001-200 (ipLDK-300)<br>001-40 0(ipLDK-300E) | - | To seize a CO Line |
| | | 3: CO Line Group | 01-0 8(ipLDK-20)<br>01-24 (ipLDK-100)<br>01-72 (ipLDK-300/300E) | - | To seize a CO Line Group |
| | | 4: Station | 10-37 (ipLDK-20)<br>100-227 (ipLDK-100)<br>100-300 (ipLDK-300)<br>100-399 (ipLDK-300)<br>1000-2599 (ipLDK-300E) | - | To call an another station |
| 124 | | SMDR Account Group Assign | 00 – 23 (ipLDK-20/100)<br>00 – 99 (ipLDK-300/300E) | 00(Not Assigned) | Stations can be assigned as a member of call account group on SMDR. A station belongs to only one group. |
| 125 | | Copy DSS Button | 01 – 05 (ipLDK-20/100)<br>01 – 15 (ipLDK-300/300E) | | The assigned DSS button can be copied to another station or ICM group. |
| | 1 | Copy DSS to station | | | |
| | 2 | Copy DSS to ICM Group | | | |
| 126 | | Station IP List | 01-28 | | Only for ipLDK-20 |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 130 | | Display Station Number by COS | | | COS stands for Class of Service. It means, defends on the grade of COS, the service could be limited. The certain COS of station could be checked. |
| | 1 | Show station by assigned day COS | | | |
| | 2 | Show station by assigned night COS | | | |
| 131 | | Display station number by CO access Group. | 01-09 (ipLDK-20) 01-25 (ipLDK-100) 01-73 (ipLDK-300/300E) | | System can display station by CO access group. |

## 4.3.13 CO LINE BASE PROGRAM

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 140 | | CO Service Type | | | In this program mode, you can program the following items. |
| | 1 | CO Type | 1-5 | 1(Normal) | 1 = Normal, 2 = RESERVED (ipLDK-20) A_DID (ipLDK-100/300 /300E), 3 = ISDN DID/MSN 4 = RESERVE (ipLDK-20), TIE (ipLDK-100/300/300E) 5 = DCO DID |
| | 2 | Detailed Attribute of the type | | | |
| | | DISA(D/N/W) | | | Day / Night / Weekend / Lunch / On-Demand |
| | | | DISA SVC | ON /OFF | OFF |
| | | | VMIB ANNC | 00-70 | 00 (Not Assigned) |
| 141 | | CO Line Attributes –I | 1-9 | | |
| | 1 | CO Line Group Assignment | ipLDK-20=00-09 ipLDK-100=00-25 ipLDK-300/300E=00-73 | 1 | Each CO Line must be a member of CO Line Group. Groups may be assigned according to CO type and Class-Of-Service. Group 00 means private group, and group 09 (ipLDK-20), 25 (ipLDK-100), 73 (ipLDK-300/300E). |
| | 2 | CO Line COS | 1-5 | 1 | COS is assigned to each CO line. |
| | 3 | DISA Account Code | ON/OFF | OFF | If this value is set to ON, when the incoming CO caller tries to access another CO Line by dialing CO Line access code, the caller should enter the authorization code. This is applied only when CO Service type is DISA. |
| | 4 | CO Line Assign | POL/LOOP | LOOP | If this value is set to ON, Reverse Polarity is applied to the CO Line; otherwise, Loop Start is applied. |
| | 5 | CO Line Type | PBX/CO | CO | If this value is set to PBX, the opposite system is PBX. If it is set to CO, the system is Central Office. |
| | 6 | CO Line Signal Type | DTMF/PULSE | DTMF | If this value is set to DTMF, the CO Line signaling type is set to DTMF; otherwise, signaling type is set to Pulse. |
| | 7 | Flash Type | GROUND/LOOP | LOOP | This value is applied to analogue CO Line only. |
| | 8 | UNA | ON / OFF | OFF | If this feature is set to ON, Universal Answer service is applied to this CO Line. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 9 | CO Line Group Account | ON / OFF | OFF | If this value is set to ON, the CO Line user should enter authorization code to access this CO Line. |
| | 10 | CO Tenancy Group | 0-5 | 0 | This value means ICM Tenancy group number the station belongs to. This station receives the CO Call.<br>If this value is set, separated Day/Night ring mode is applied to the incoming CO Call according to each ICM tenancy group attendant Day/Night ring mode. |
| 142 | | CO Line Attributes – II | 1-13 | | |
| | 1 | CO Line Name Display | ON / OFF | OFF | If this value is set to ON and the CO Line Name is assigned, the Name is displayed on the station LCD when the station gets the CO incoming call through this CO Line. |
| | 2 | CO Line Name Assign | Max 12 char | - | This value means the name of the CO Line. |
| | 3 | Metering Unit | 00-06 | 0 | This value determines the Unit used to perceive a pulse from CO Line. |
| | 4 | Line Drop using CPT | ON / OFF | OFF | If this value is set to ON, CPT checks the incoming CO Line when answered and if CPT detects dial tone, then system drops the line for toll restriction. |
| | 5 | CO Distinct Ring | 0-4 | 0 | If this value is not set to 0, the designated ring tone is heard at the station when the station gets the incoming CO Call so that the user can distinguish incoming CO Call and ICM Call with its different ring tone.<br>Each ring tone can be adjusted at PGM 422. |
| | 6 | CO Line MOH | 0-9 (ipLDK-20)<br>0-12 (ipLDK-100)<br>0-13 (ipLDK-300) | 1 | This value is used at MOH of the CO Line. |
| | 7 | PABX CO Dial Tone | YES / NO | YES | If this value is set to YES, PX or PABX provides CO Dial Tone. Otherwise PX or PABX does not provide CO Dial Tone. Instead, ipLDK system provides it. |
| | 8 | PABX CO Ring Back Tone | YES / NO | NO | If this value is set to YES, PX or PABX provides CO Ring Back Tone.<br>Otherwise PX or PABX does not provide CO Ring Back Tone. Instead, ipLDK system provides it. |
| | 9 | PABX CO Error Tone | YES / NO | NO | If this value is set to YES, PX or PABX provides CO Error Tone. Otherwise PX or PABX does not provide CO Error Tone. Instead, ipLDK system provides it. |
| | 10 | PABX CO Busy Tone | YES / NO | NO | If this value is set to YES, PX or PABX provides CO Busy Tone. Otherwise PX or PABX does not provide CO Busy Tone. Instead, ipLDK system provides it. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 11 | PABX CO Announce Tone | YES / NO | NO | If this value is set to YES, PX or PABX provides CO Announce Tone.<br>Otherwise PX or PABX does not provide CO Announce Tone. Instead, ipLDK system provides it. |
| | 12 | CO Flash Timer | 000 – 300 | 050 | This value provides the length of time limit of CO Flash.<br>CO Flashing is available within this timer. Otherwise, the CO Line is released. 10msec base |
| | 13 | Open Loop Detect Timer | 0 – 20 | 0 | This value provides the time limit of CO Open Loop. 100msec base |
| | 14 | Line Length | LONG/SHORT | SHORT | This feature is used to distinguish the line length when the CO Line length is too variable (SAF only). |
| | 15 | DISA Answer Timer | 1-9 | 5 | The incoming DISA call is answered after this timer expires. |
| | 16 | DISA Delay Timer | 1-9 | 2 | After this timer, DTMF Receiver is attached after DISA line answered (CIS only). |
| | 17 | RESERVED | | | |
| | 18 | BUSY/ERROR CPT Detect | ON/OFF | OFF | If this value is set ON, a CO call is dropped when a CPT is detected from the CO. This is applied to CO-to-CO call and normal incoming or outgoing call also.<br>To detect a tone from the CO line, a CPT detection board is required. |
| | 19 | LD DELAY COUNT | 0~5 | 0 | After sending Long Distance Code automatically, Pause Time will be added. (CIS Only) |
| 143 | | ISDN CO Line Attribute | 1-6 | | |
| | 1 | COLP Table Index | 00-50 | Not Assigned | To know connected party number information, CLI refer this value.<br>If this value is set to 50, the CLI of this CO Line refers to PGM114-FLEX5.<br>Else if this value is set to 00-49, the CLI of this CO Line refers COLP Table (PGM201). |
| | 2 | CLIP Table Index | 00-50 | Not Assigned | To know calling party number information, CLI refer this value.<br>If this value is set to 50, the CLI of this CO Line refers to PGM114-FLEX5.<br>Else if this value is set to 00-49, the CLI of this CO Line refers COLP Table (PGM201). |
| | 3 | Type of Calling Number | 0-4 | 2 | This value is used to set the call type of ISDN CO line CLI. |
| | 4 | DID Conversion Type | 0-2 | 0 | When CO Service Type is set to ISDN DID/MSN (PGM140), this value is used to decide DID digit conversion type.<br>If this value is set to 0, incoming digits are converted as PGM146.<br>If set to 1, no digit conversion occurs if the caller dials valid station number; the station gets the call.<br>If set to 2, it refers Flexible DID Table (PGM231). |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 5 | DID Remove No. | 00-99 | Not Assigned | If this value is not 0, and the CO Line is DID Line, the system discard the incoming DID digits up to amount of this value.<br>e.g. If this value is set to 02 and the outside caller dialed '01245', then the first '01' is removed. |
| | 6 | ISDN Enblock Send | ON/OFF | OFF | If this value is set to ON, Enblock Sending Mode is applied to outgoing CO calls. |
| | 7 | CLI Transit | 1 = ORI<br>0 = CFW | CFW(0) | When using networking, If this value is set to ORI, the originate caller's CLI is sent for CLI. Otherwise, the call forwarded Station CLI is sent. |
| | 8 | Numbering Plan ID | F1 = 0-7<br>F2 = 0-7 | 0 | Calling Party/Called Party Numbering Plan ID setting.<br>F1 : Calling NPI / F2 : Called NPI |
| | 9 | ISDN SS CD/CR | 0 = No Service<br>1 = Call Deflection<br>2 = Call Rerouting | 0 | ISDN call deflection or call rerouting service is available. |
| | 10 | Reserved | | | |
| | 11 | ISDN Call Proc. Inband Message | ON/OFF | OFF | If this value is set to ON, Inband info. In call proceeding is available |
| | 12 | LONG CLI TYPE | 0-2 | | If this value is set to 0, the CLI is made as before (refer to PGM200/PGM114)<br>If this value is set to 1 or 2, the CLI is same as Long CLI (Station Long CLI 1 or 2). |
| | 13 | ISDN Call Rerouting | 1 = Enable<br>0 = Disable | Enable | If this value is set to ON, ISDN call rerouting service is available. |
| 144 | | CO Ring Assignment | | | STA Range (Delay = 0 – 9), Hunt Group, VMIB Message |
| | 1 | Day | STA_R / HUNT / VMIB / NET-STA | | |
| | 2 | Night | STA_R / HUNT / VMIB VMIB / NET-STA | | |
| | 3 | Weekend | STA_R / HUNT / VMIB VMIB / NET-STA | | |
| | 4 | Lunch | STA_R / HUNT / VMIB VMIB / NET-STA | | |
| | 5 | On-demand | STA_R / HUNT / VMIB VMIB / NET-STA | | |
| 145 | | CO Ring Assignment Display | | | You can check the ring assignment destination of the CO line for each Day/Night Ring Mode.<br>If CO Call is assigned to the station at Day or Night Mode, you can see the delay value also.<br>e.g.) 100(1) means station 100 gets the ring with delay 1.<br>When there are too many stations, you can scroll data using volume up/down key. |
| | 1 | Day | | | |
| | 2 | Night | | | |
| | 3 | Weekend | | | |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 4 | Lunch | | | |
| | 5 | On-demand | | | |
| 146 | 1 | Incoming Prefix Code Insertion | ON/OFF | OFF | If this value is set to ON, prefix code will be attached in front of incoming CLI. |
| | 2 | Outgoing Prefix Code Insertion | ON/OFF | ON | If this value is set to ON, prefix code will be attached in front of outgoing CLI. |
| | 3 | ISDN Line Type | μ-Law/ A-Law | A-Law (OFF) | This value is used to set ISDN CODEC Type. |
| | 4 | Calling Sub-address | ON/OFF | OFF (NO) | If this value is set to ON, calling party sub-address of the ISDN station is attached when an ISDN station makes an outgoing CO Call through this CO Line. |
| | 5 | DID DGT Receive Number | 2 – 4 | 3 | This value is used as count of the received DID Digit number to route DID incoming Call. |
| | 6 | DID Digit Mask | 4 digits (d.*,#) | #*** | When DID Conversion Type (PGM143 – FLEX4) is set to 0, The received DID digits are converted by this value. The number 0-9, #, * can be entered. # means to ignore received digit, and * means to bypass the digit. The length of DID Digit Mask is 4 (‘1234’ is received when DID Digit Mask is set as ‘#8**’, the digit is converted as ‘834’). |
| | 7 | Collect Call Blocking | 0 – 2<br>0 = Not Block<br>1 = block with indicator<br>2 = block without indicator | 0 | |
| | 6 | Collect Call Answer Timer | 1 – 250 | 10 | |
| | 6 | Collect Call Idle Timer | 1 – 250 | 20 | |

## 4.3.14 SLOT BASE PROGRAM

*(Not available in ipLDK-20)*

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 155 | 1 | R2 CRC Check | ON/OFF | ON | If this value is set to ENABLE, the R2 CRC is checked. |
| | 2 | Set Distance coefficient | 0-3 | 0 | Gain value is set according to the Distance Coefficient. |
| | 3 | DCO IP Address | 12 Digits (IP Address) | - | IP Address of E1IB |
| | 4 | DCO Gateway IP Address | 12 Digits (IP Address) | - | Gateway IP Address of E1IB |
| | 5 | DCO Subnet Mask | 12 Digits(IP Address) | - | Subnet Mask IP Address of E1IB |
| | 6 | DCO Server IP Address | 12 Digits (IP Address) | - | Server IP Address of E1IB |
| | 7 | Master Clock | 1(ON) / 0 (OFF) | 0 (OFF) | This value decides E1IB is Master party or Slave party |

## 4.3.15 SYSTEM BASE PROGRAM

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 160 | | System Attributes-I | 1-15 | | |
| | 1 | Attendant Call Queuing Ringback Tone | RBT/MOH | MOH | If this value is set to RBT, ring back tone is provided to the station when the station calls busy attendant. Otherwise hold tone or VMIB-MOH (PGM171-FLEX2) is provided. |
| | 2 | CAMP RBT/MOH | RBT/MOH | MOH | MOH or Ring Back tone is heard on camp-on. |
| | 3 | CO Line Choice | LAST/ROUND | Round | In seizing a CO Line among CO line group, if this value is set to LAST CHOICE, Last available CO Line is seized. Otherwise, CO line is seized round robin choice. |
| | 4 | DISA Retry Counter | 0-9 | 3 | When the DISA user fails to call a station or access a feature, then DISA user can retry other calls or features within this retry counter. If DISA user cannot access appropriately within this counter, this call is routed according to DID/DISA destination (PGM167). |
| | 5 | ICM Continuous Dial-Tone | CONT/DISCONT | CONT | This value sets whether ICM dial tone is continuous or not. |
| | 6 | CO Dial-Tone Detect | ON/OFF | OFF | When the speed dial is activated, if this value is set to ON, system detects dial tone using CPT instead of pause timer. |
| | 7 | External Night Ring | ON/OFF | OFF | If this value is set to ON, when CO incoming call is received and UNA service is activated, the call is sent to LBC1. |
| | 8 | Hold Preference | SYS/EXEC | SYS | There are two types of Hold; System Hold and Exclusive Hold. If a call is held as System Hold, any station can retrieve that call, Otherwise only holding station can retrieve that call. |
| | 9 | Multi-line Conference | ON/OFF | ON | If this value is set to ON, a conference with multi-CO lines is available. |
| | 10 | Print LCR Conversion Digit | ON/OFF | OFF | If this value is set to On, LCR converted digits are showed on LCD and SMDR data. Otherwise original dialed digits are showed. |
| | 11 | Conference Warning Tone | ON/OFF | ON | If this value is set to ON, other members will hear warning tone when a new member enters the conference. |
| | 12 | Off-net Prompt Usage | ON/OFF | ON | If this value is set to On, off-net VMIB announcement (prompt) will be heard when the call is Off-net call forwarded. It is only applied to CO-to-CO Transfer. |
| | 13 | Off-net DTMF Tone | ON/OFF | ON | If this value is set to ON, dialing DTMF tone will be heard to the outside caller when the call is Off-net call forwarded. It is only applied to CO-to-CO Transfer. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 14 | CO Voice Path Connect | IMM/DGT | DGT | If this value is set to IMM (immediate), voice path is connected immediately at the CO outgoing call, Otherwise It is connected after dialing any digits. |
| | 15 | Transfer Tone | RBT/MOH | MOH | While a call is transferred to destination station, if this value is set to RBT, transferred station will be heard ring back tone. Otherwise MOH will be heard. |
| | 16 | CO-CO Transfer CPT Detect | ON/OFF | OFF | CPT tone detect on CO to CO transfer. |
| | 17 | ACD Info Print | ON/OFF | OFF | |
| | 18 | CO-CO Unsupervised Conference Timer Extend | ON/OFF | OFF | Extend CO to CO Unsupervised Conference Timer. |
| | 19 | CALL LOG LIST NUMBER | 15-50 | 15 | Set the number of Call Log List per stations. |
| | 20 | Cut ISDN Overlap Dial Noise | | OFF | Cut the noise of ISDN overlap dialing. |
| 161 | | System Attributes-II | 1-18 | | |
| | 1 | Network Time/Date Setting | ON / OFF | OFF | If this value is set to ON, the system time/date are set by the network time/date. |
| | 2 | Off-Hook Ring Signal Type | MUTE/BURST | MUTE | The off-hook ring type in the system can be set to mute or one burst ring. |
| | 3 | Override 1st CO Line Group | ON/OFF | ON | If this value is set to ON, if there is no available CO Line in the first CO Line Group, system can access the next accessible CO Line Group. |
| | 4 | Page Warning Tone | ON/OFF | ON | If this value is set to ON, page warning tone will be heard when paging starts. |
| | 5 | Auto Privacy | ON/OFF | ON | If this value is set to ON, the call is protected from override regardless of Station Override Privilege (PGM113-FLEX 4). |
| | 6 | Privacy Warning Tone | ON/OFF | ON | If this value is set to ON, privacy warning tone will be heard when the call is overridden. |
| | 7 | Single Ring for CO Call | YES/NO | NO | The cadence of ICM ring is set to 1 sec. ON/ 4 sec. OFF.<br>The cadence of CO ring is set to 0.4 sec. ON/ 0.2 sec. OFF/ 0.4 sec. ON/ 4 sec. OFF.<br>If this value is set to YES, the ICM ring cadence and the CO ring cadence is reversed each other. |
| | 8 | WTU Auto Release | ON/OFF | OFF | If this value is set to ON, WTU is released automatically. |
| | 9 | ACD Print Enable | ON/OFF | OFF | If this value is set to ON, ACD Print is available. |
| | 10 | ACD Print Timer | 001 – 255<br>(3 digits) | 001 | ACD database is printed per desired time interval.(10 sec. or 1 hour based : PGM161-FLEX 14) |
| | 11 | ACD clear Database after Print | ON/OFF | OFF | If this value is set to ON, ACD database is initialized after printed out. |
| | 12 | VMIB PROMPT GAIN | 00 – 31 | 08 | This value is gain of VMIB Announcement (Prompt). Whenever VMIB Announcement is played, this value is applied. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 13 | CLI Information of VM SMDI | ON/OFF | OFF | If this value is set to ON, CLI is added when Voice Mail information is printed through RS232 port by SMDI. |
| | 14 | ACD Print Timer Unit | HOUR/SEC | SEC | This value determines the unit of ACD Print timer (ADMIN 161 – FLEX 10).<br>(1 hour or 10 seconds) |
| | 15 | Set VM SMDI Type | TYPE II/TYPE I | TYPE I | This value sets VM SMDI type. |
| | 16 | Incoming Toll Check | ON/OFF | OFF | If this value is set to ON, the system checks toll of incoming CO call. |
| | 17 | Auto FAX Transfer CO<br>(Only ipLDK-20) | 01-16 | - | The programmed CO line will be used for automatic FAX transfer. |
| | 18 | DSS Indication | Enable/Disable | Disable | If this value is set to ENABLE, LED indication of {CO} button or {DSS} button is blocked (ex., LED does not flash even if there is incoming call to the assigned CO Line or Station).<br>This feature is not applied for direct call such as DID/DISA. |
| | 19 | UK billing mode | ON/OFF | OFF | If this value is set to ON, UK Billing Mode is applied (UK only). |
| | 20 | COS 7 when auth fail | ON/OFF | OFF | If this value is set to ON, station COS will be changed to 7 when invalid authorization code is entered. |
| | 21 | 5 Digits Authorization Code | ON/OFF | OFF | Authorization Code length type can be selected.<br>OFF = 3-11 digits<br>ON = 5 digits |
| | 22 | LCR Dial Tone Detect | ON/OFF | OFF | If this value is set to ON, ipLDK system first checks if the CO provides dial tone in case if analog CO is seized for LCR dialing. If no dial tone, the call is rerouted to Alternate DMT Index. If LCR type is set to M13, LCR dial tone detect option is not applied. |
| | 23 | Trasnit-OUT Security | ON/OFF | OFF | When system receive setup packet for Transit-Out feature from VOI CO line, system can check setup packet with registered IP whether if this packet is valid or not. If [TRANSIT-OUT SECURITY] admin is set, received IP in all of received setup packet for transit-out feature will be checked with registered IP, and if this IP is verified, transit-out feature will be operated. |
| 162 | - | ADMIN Password | 4 Digits | - | ADMIN password can be assigned to enter ADMIN Programming mode for only Administrator who knows the ADMIN password. It is not assigned by default. |
| 163 | 1 | Alarm Enable | ON/OFF | OFF | If this value is set to ON, Alarm is available. |
| | 2 | Alarm Contact Type | CLOSE/OPEN | CLOSE | |
| | 3 | Alarm Mode | ALARM/BELL | ALARM | |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 4 | Alarm Signal Mode | RPT/ONCE | RPT | If this value is set to REPEAT, the Alarm Signal is repeated until Alarm Reset. |
| 164 | 1-5 | Attendant Assignment | STA No. | 1 : 10 | Maximum 5 Attendants can be assigned including the Main Attendants and System Attendant. The system attendant is different from main attendant in aspect of the call handling and system management priority. The system attendant has more powerful priority than main attendant. The system and main attendants can be assigned to each 1 and maximum 4. So the sum of system and main attendants should be less than 5. As default, the System Attendant is assigned to Station 101, and others are not assigned. |
| 165 | - | Auto Attendant | | | User may set the number of the VMIB announcement for auto attendant. |
| | 1 | Auto Attendant Usage | ON / OFF | OFF | If this value is set to ON, Auto Attendant is activated. |
| | 2 | Auto Attendant VMIB Announce # | 00-70 | 00 (not_assigned) | This value is the number of VMIB announcement played when Auto Attendant is activated. |
| 166 | | CO-to-CO COS | 1-11 | 1 | When an external user of DID/DISA/TIE line tries to access another CO Line in the system, CO-to-CO COS is applied. The attributes of CO-to-CO COS are the same as the station COS. |
| | 1 | Day COS | 1-11 | 1 | Class-of-Service of Day Mode |
| | 2 | Night/Weekend COS | 1-11 | 1 | Class-of-Service of Night / Weekend Mode |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 167 | | DID/DISA Destination | F1-F4 | | When there is a DID/DISA incoming call, if the destination is not answer / invalid / busy, the call is routed to Attendant / Hunt group / or the caller gets the proper tone.<br>If Attendant is assigned for DID/DISA destination, first, the call will check ring assignment (PGM144), if there exists ring assigned station the call is routed to that station. If there is not ring assigned station, then the call is routed to Attendant.<br>If VMIB announcement usage is enabled, The proper announcement is presented to the caller before the call is routed.<br>This destination is applied when DISA Retry Counter expired.<br>If the destination is set to attendant, system checks if there's any ring assigned station and gives the ring to assigned station first. If the ring assigned station does not answer also, then the attendant receives the call. |
| | 1 | Busy Destination | F1-F3 | F1 | When there is a DID/DISA incoming call, and if the caller dialed busy destination, the call is routed to Busy Destination (Tone/Attendant/Hunt). |
| | 2 | Error Destination | F1-F3 | F1 | When there is a DID/DISA incoming call, and if the caller dialed invalid number, the call is routed to Error Destination (Tone/Attendant/Hunt). |
| | 3 | No Answer Destination | F1-F3 | F1 | When there is a DID/DISA incoming call, and the destination is not answer, the call is routed to No Answer Destination (Tone/Attendant/Hunt). |
| | 4 | DND Destination | F1-F3 | F1 | When there is a DID/DISA incoming call and the destination is on DND state, then the call is routed to DND Destination (Tone / Attendant / Hunt). |
| | 5 | VMIB Prompt Usage | F1-F5 | F1 | If the value is set to ON and VMIB is available, The proper VMIB announcement is presented to the caller before the call is routed to each Destination. |
| | | Busy Prompt Usage | ON/OFF | ON | If the value is set to ON, Busy announcement is presented to the caller before the call is routed to Busy Destination. |
| | | Error Prompt Usage | ON/OFF | ON | If the value is set to ON, Error announcement is presented to the caller before the call is routed to Error Destination. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | | DND Prompt Usage | ON/OFF | ON | If the value is set to ON, Busy announcement is presented to the caller before the call is routed to Busy Destination when the original destination is in DND. |
| | | No Answer Prompt Usage | ON/OFF | ON | If the value is set to ON, No Answer announcement is presented to the caller before the call is routed to No Answer Destination. |
| | | Attendant Transfer Prompt Usage | ON/OFF | ON | If the value is set to ON, Attendant Transfer announcement is presented to the caller before the call is routed to Attendant. |
| | 6 | Reroute Busy Destination | F1-F3 | F1 | When DID/DISA call is rerouted by no answer and routed destination is busy, this call is rerouted to destination by reroute busy destination (Tone/Attendant/Hunt). |
| | 7 | Reroute Error Destination | F1-F3 | F1 | When DID/DISA call is rerouted by no answer and routed destination is error, this call is rerouted to destination by reroute busy destination (Tone/Attendant/Hunt). |
| | 8 | Reroute No Answer Destination | F1-F3 | F1 | When DID/DISA call is rerouted by no answer and routed destination does not answer, this call is rerouted to destination by reroute no answer destination (Tone/Attendant/Hunt). |
| | 8 | | | | |
| 168 | 1 | First Contact | 1-3 (ipLDK-20)<br>1-5 (ipLDK-100 /300/300E) | - | 1 = LBC(STA #)<br>2 = Door<br>3 = Ext. 1<br>4 = Ext. 2<br>5 = Ext. 3 |
| | 2 | Second Contact | 1-3 (ipLDK-20)<br>1-5 (ipLDK-100/300/300E | - | |
| | 3 | Third Contact | 1-3 (ipLDK-20)<br>1-5 (ipLDK-100/300/300E | - | |
| | 4 | Forth Contact | 1-3 (ipLDK-20)<br>1-5 (ipLDK-100/300/300E | - | |
| | 5 | Fifth Contact | 1-3 (ipLDK-20)<br>1-5 (ipLDK-100/300/300E | - | |
| | 6 | Sixth Contact | 1-3 (ipLDK-20)<br>1-5 (ipLDK-100/300/300E | - | |
| | 7 | Seventh Contact | 1-3 (ipLDK-20)<br>1-5 (ipLDK-100/300/300E | - | |
| 169 | 1 | LCD Time Display Mode | 12H / 24H | 12H | Two LCD Time formats are Ordinary (12-hour)/Military (24-hour) mode. |
| | 2 | LCD Date Display Mode | MMDD/DDMM | DDMMYY | Two LCD date formats are Day/Month/Year (DDMMYY) or Month/Day/Year (MMDDYY) mode. |
| | 3 | LCD Language Display Mode | 00-15 | 12 (Korean) | The LCD language format can be selected. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 170 | | Modem Associated Device | | | Modem service is available only when there's MODU on MPB. |
| | 1 | Station Number | 10-37 (ipLDK-20)<br>100-227 (ipLDK-100)<br>100-300 (ipLDK-300)<br>100-399 (ipLDK-300)<br>1000-2599 (ipLDK-300E) | STA37 (ipLDK-20)<br>STA 227 (ipLDK-100)<br>STA 399 (ipLDK-300)<br>STA 2599 (ipLDK-300E) | This value means the Modem-associated station. To use Modem line flexibly, associate one station with Modem. Then incoming CO Call is connected to Modem device if the station gets the call.<br>The last station is assigned as Modem associated station. |
| | 2 | CO Number | 01-16 (ipLDK-20)<br>01-40 (ipLDK-100)<br>001-200 (ipLDK-300)<br>001-400 (ipLDK-300E) | - | If CO Line is associated with Modem, All of the incoming CO Call through this Line is connected to Modem. The Modem-associated CO Line cannot be used to outgoing CO Call. |
| 171 | 1 | BGM Type | 0-12 (ipLDK-300/300E)<br>0-11 (ipLDK-100)<br>0-8 (ipLDK-100) | 1 | |
| | 2 | MOH Type | 0-13 (ipLDK-300/300E)<br>0-12 (ipLDK-100)<br>0-9 (ipLDK-20) | 1 | When a CO line call is placed in the hold state (system, exclusive, transfer, conference, etc) the external party will hear music. In this way, the CO line party can be notified that the connection is still established. |
| | 3 | ICM Box Music Channel | 0-12 (ipLDK-300/300E)<br>0-11 (ipLDK-100)<br>0-8 (ipLDK-20) | 1 | |
| | 4 | Assign MOH via SLT | F1 – F5 | | To assign SLT MOH, set this value and match the SLT station number of the SLT port. |
| | 5 | Dial Tone Source | 0-5 | 0 (not assigned) | To assign external dial tone, set the SLT station number of the SLT port. |
| | 6 | ICM Ring Back Tone | 0-5 | 0 (not assigned) | To assign external ICM ring back tone, set the SLT station number of the SLT port. |
| | 7 | DID CO Ring Back Tone | 0-5 | 0 (not assigned) | To assign external DID ring back tone, set the SLT station number of the SLT port. |
| 172 | 1 – 4 | PBX Access Code | Max. 2 digits | - | Maximum 4 PABX Access Codes can be assigned. Each PABX Access Code is 1 or 2-digit number.<br>By default, PABX Access Codes are not assigned at all. |
| 173 | | PLA Priority Setting | | | PLA priority is set exclusively. |
| | 1 | Transfer CO | 1 – 4 | 1 | |
| | 2 | Recalling CO | 1 – 4 | 2 | |
| | 3 | Incoming CO | 1 – 4 | 3 | |
| | 4 | Queued CO | 1 – 4 | 4 | |
| 174 | | RS-232 PORT Setting | | | Baud Rate, CTS/RTS, P-Break, LPP can be assigned at this feature to COM1 port, COM2 – MODU port. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 1 | Baud Rate | 0-7 | 19200 | 0 = UNKNOWN<br>1 = UNKNOWN<br>2 = 1200 BAUD<br>3 = 2400 BAUD<br>4 = 4800 BAUD<br>5 = 9600 BAUD<br>6 = 19200 BAUD<br>7 = 38400 BAUD |
| | 2 | CTS/RTS | ON / OFF | OFF | |
| | 3 | P-BREAK | ON / OFF | OFF | |
| | 4 | LPP | 001-199 | 060 | |
| 175 | 1 | Off-line SMDR/Statistics Print | 01-14(ipLDK-300/300E)<br>01-12 (ipLDK-100)<br>01-10 (ipLDK-20) | COM1(01): | Off-line SMDR data is printed through this port. |
| | 2 | ADMIN Data | | | When PGM451 is used, the ADMIN data is printed through this port. |
| | 3 | Traffic Print | | | Traffic analysis data is printed through this port. |
| | 4 | SMDI Print | | | SMDI data is printed through this port. |
| | 5 | Call Info Print | | | Call information data is printed through this port. |
| | 6 | On-line SMDR Print | | | On-line SMDR data is printed through this port. |
| | 7 | Trace Print | | | Trace data is printed through this port. |
| | 8 | Debug Print | | | Debug data is printed through this port. |
| | 9 | PC_ADM | | AUTO SELECT | PC Admin is connected through this port. |
| | 10 | PC_ATD | | NET_PCATD | PC Admin is connected through this port. |
| | 11 | CTI | | NET_CTI | CTI is connected through this port. |
| | 12 | REMOTE_DIAG | | NET_REMOTE | Remote Diagnostic data is printed through this port. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 176 | - | Pulse Dial/Speed Ratio | 66/33<br>60/40 | 66/33 | Pulse dial speed ratio is set only for 10 PPS. |
| 177 | | SMDR Attributes | 1-14 | ALL | Station Message Detail Recording (SMDR) will provide details on both incoming and outgoing calls. As an assignable database option, If All Call record type is selected, incoming and outgoing local and long distance calls are all provided. If only Long Distance is selected, then only outgoing calls that meet the toll check status requirements listed below are provided. |
| | 1 | SMDR Save Enable | ON/OFF | OFF | If this value is set to ON, maximum 5000 of SMDR data can be recorded at system memory. |
| | 2 | SMDR Print Enable | ON/OFF | OFF | If this value is set to ON, SDMR data can be printed real time through the serial/MODEM/LAN port. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 3 | SMDR Recording Call Type | LD/ALL Call | LD | If this value is set to LD, only long distance outgoing CO call is sent via SMDR.<br>If this value is set to ALL, all outgoing CO call is sent via SMDR.<br>The long distance call is defined that the call satisfies the condition of PGM177 – FLEX 4, or FLEX 14. |
| | 4 | SMDR Long Distance Call Digit Counter | 07-15 | 07 | The long distance call is defined that the call satisfies the condition of PGM177 – FLEX 4, or FLEX 14.<br>If digit counters of the outgoing CO call are more than this value, it is considered as long distance call. |
| | 5 | Print Incoming Call | ON/OFF | OFF | If value is set to ON, all incoming calls are printed. |
| | 6 | Print Lost Call | ON/OFF | OFF | If value is set to ON, lost calls are printed<br>The lost call is defined that the call is unanswered. |
| | 7 | Records in Detail | ON / OFF | ON | Due to limited system memory size, in places where many calls take place, the SMDR record buffer can easily saturated. So, if the customer doesn't need the detailed call information but total call, total metering count and total cost for individual station, then it is possible to save only the total accumulation, rather than the whole detailed records.<br>If this value is set to ON, not only total call, total metering count and total cost for individual station, but also the detail call records are saved maximum 5000.<br>If this value is set to OFF, only total call, total metering count and total cost for individual station information are served. |
| | 8 | SMDR Dial Digit Hidden | 0-9 | 0 | If this value is set non-zero value, the printed digits from right or left will be replace to '*' symbol up to this value.<br>The direction of right or left can be set at PGM177 – FLEX button 13. |
| | 9 | SMDR Currency Unit | 3 English Chars | - | For easy identification of call cost, the currency unit can be entered with 3 alphabet characters to be printed in front of call charge amount. |
| | 10 | SMDR Cost Per Unit Pulse | 6 digits | - | This is the call cost unit per cost metering pulse, which is sent from the Central Office. |
| | 11 | SMDR Fraction | 0-5 | 0 | This value means the decimal position point of the cost per unit pulse. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 12 | SMDR Start Timer | 0–250 | 0 | If this value is set non-zero value, only the outgoing CO call more than this value time is served SDMR. |
| | 13 | SMDR Hidden Digit | Right/Left | Right | If this value is set to RIGHT, SDMR digit hiding is executed the right-to-left direction.<br>At this case, if dialed '1234567890', SDMR printed hidden digits are formatted '12345*****'.<br>If this value is set to LEFT, SDMR digit hiding is executed to left-to-right direction.<br>At this case, if dialed '1234567890', SDMR printed hidden digits are formatted '*****67890'. |
| | 14 | SMDR Long Distance Codes | FLEX 1-5 | 0 | The long distance call is defined that the call meets the conditions of PGM177 – FLEX 4, or FLEX 14.<br>Max. 5 SMDR long distance codes are available. SMDR long distance code is 1 or 2 digit number. Default, SMDR long distance code is 0. |
| | 15 | MSN Print On SMDR | ON/OFF | OFF | If this value is set to ON, the MSN number is printed on SMDR output. |
| | 16 | Print Caller Number | ON/OFF | ON | If this value is set to ON, the caller number is printed at incoming call SMDR. |
| | 17 | ICM SMDR Save | ON/OFF | OFF | If this value is set to ON, ICM call data is stored in Off-line SMDR. |
| | 18 | ICM SMDR Save | ON/OFF | OFF | If this value is set to ON, ICM call data is printed in On-line SMDR. |
| | 19 | SMDR Interface Service | ON/OFF | OFF | If this value is set to ON, SMDR data is saved and sent when there's SMDR data request from application software. When using SMDR interface service, normal Off-line SMDR cannot be saved or printed. |
| | 20 | I-SMDR Connection (Service) Type | LAN/SIO | | This program determines port to be used for printer when SMDR interface service is set. |
| 178 | 1 | System Time Setting | 4 digits | - | Hour/Min in sequence (ex., In case 11:30, enter 1130 ). |
| | 2 | System Date Setting | 6 digits | - | Month/Day/Year in sequence (ex., for 27/January/2004, enter 270104). |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 179 | 1 | Review Linked Station Pairs | 1000-1599 (LDK0300E 100-399 (ipLDK-300) 100-227 (ipLDK-100) 10-37 (ipLDK-20) | None | The linked station pair is defined section 2.9.2. Review of the programmed linked station pairs can be accessed at flexible button 1 sub-menu. Registration and delete of the linked station pairs can be set at flexible button 2 sub-menu. |
| | 2 | Linked Station Pair Delete | 2 STA # | - | |

## 4.3.16 SYSTEM TIMER PROGRAM

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 180 | 1 | Attendant Recall Timer | 00–60 (2 digits) | 01 (min) | If a recalled call arrives at the attendant Station, the attendant may not answer the call. The system will disconnect the call if the attendant does not answer the call. This ADMIN program sets the amount of time before system disconnects the call. |
| | 2 | Call Park Recall Timer | 000–600 (3 digits) | 120 (sec) | Setting the amount of time before a call placed in a call park location will recall at the station placing the park |
| | 3 | Camp-on Recall Timer | 000–200 (3 digits) | 030 (sec) | When a station transfers to busy station by Camp-On, if the transferred-to station does not answer the call, the call will recall to the transferring station after the set time passes. This ADMIN program set the appropriate time. |
| | 4 | Exclusive Hold Recall Timer | 000–300 (3 digits) | 060 (sec) | Select the amount of time before a call placed on system hold will recall the station placing the hold. |
| | 5 | I-Hold Recall Timer | 000–300 (3 digits) | 030 (sec) | When a recalled call is not answered, the call will recall to attendant after setting time passes. Therefore This ADMIN program set the appropriate time. Select the amount of time before a call recalls the attendant. |
| | 6 | System Hold Recall Timer | 000–300 (3 digits) | 030 (sec) | Determines the amount of time before a call placed on system hold will recall the station placing the hold. |
| | 7 | Transfer Recall Timer | 000–300 (3 digits) | 030 (sec) | Select the amount of time a transferred call will ring at the station receiving the transfer and how long it will recall the station transferring the call. |
| | 8 | ACNR Delay Timer | 000–300 (3 digits) | 030 (sec) | When ACNR Pause Timer expires and there is no available CO Line in the group, ACNR trial is delayed for this timer. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 9 | ACNR No Answer Timer | 10–50 (2 digits) | 30 (sec) | This timer is invoked after system detects CO ring back tone from CO party. If the call isn't answered, the system will disconnect the call. |
| | 10 | ACNR Pause Timer | 005–300 (3 digits) | 005 (sec) | When this timer is expired, ACNR is activated. |
| | 11 | ACNR Retry Counter | 01–30 (2 digits) | 10 | ACNR is executed up to this value. After trial of this retry counter, ACNR is canceled. |
| | 12 | ACNR No Tone Retry Counter | 1–9 (1 digit) | 3 | This ADMIN program can set the trial number of seizing the CO line for ACNR. If the CO line isn't seized, ACNR will be canceled. |
| | 13 | ACNR Tone Detect Timer | 001-300 (3 digits) | 030 (sec) | This timer is invoked upon completion of dialing and system considers the CO party is busy when the CPTU cannot detect the valid tone type until this timer expires. |
| | 14 | Automatic CO Release Timer. | 020–300 (3 digits) | 030 (sec) | Uncompleted CO line call will be automatically released after this timer. |
| | 15 | CCR Inter-Digit Timer | 000–255 (3 digits) | 030 (100ms) | This timer is used for the CCR inter-digit timer in the DISA/DID CO line. In DID type 2, it is used for DID inter-digit timer. |
| | 16 | CO Call Drop Warning Timer | 00–99 (2 digits) | 10 (sec) | If prepaid money is going to expire during a CO call, system will give warning tone, and after this time, the call will be disconnected. This timer is also used for call drop warning in Unsupervised Conference. |
| | 17 | RESERVED | | | |
| | 18 | CO Dial Delay Timer | 00–99 (2 digits) | 01 (100ms) | Voice connection to the outside party will be made after this timer. This can be used to prevent illegal dialing in case of slow response from the Central Office Line or PBX. |
| | 19 | CO Release Guard Timer | 001–150 (3 digits) | 020 (100ms) | This ADMIN program sets the amount of time before a CO line can be re-seized, after the CO call disconnects,<br>This timer controls the time necessary to guarantee idle loop state when the line is released. |
| | 20 | CO Ring Off Timer | 010–150 (3 digits) | 060 (100ms) | This timer is to secure time interval between incoming ringing signals so that the active ringing can be lasted in the system until this timer is expired. |
| | 21 | CO Ring On Timer | 1–9 (1 digit) | 2 (100ms) | This timer controls the time necessary to detect an incoming CO call as ringing into the system. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 22 | CO Warning Tone Timer | 060–900 (3 digits) | 180 (sec) | Determines the amount of time before receiving warning tone in order to remind the call elapsed time in case of outgoing CO line conversation (Only for Korea). |
| 181 | 1 | Call FWD No Answer Timer | 000–255 (3 digits) | 015 (sec) | This timer is used at the no answer call forward feature (Feature Description and Operation Manual Section 2.3.1.2, and 2.3.1.3). If station is set for No Answer Call Forward, and if station doesn't answer during this timer, then the call will be routed to the forward destination. |
| | 2 | DID/DISA No Answer Timer | 00–99 (2 digits) | 00 (sec) | This timer is used at DID or DISA call routing. If station doesn't answer about DID/DISA call during this timer, the call will be routed to PGM 167–FLEX 3 value. |
| | 3 | VMIB User Record Timer | 010–255 (3 digits) | 020 (sec) | This is the maximum time that station user can record his VMIB announcement. |
| | 4 | VMIB Valid User Message Timer | 0-9 (1 digit) | 4 (sec) | This is the minimum time that station user must record his VMIB announcement.<br>If this value is set to 0, VMIB announcement can not be recorded. |
| | 5 | Door Open Timer | 05–99 (2 digits) | 20 (100ms) | Select the length of time that is needed to execute the door open relay for the setting time. |
| | 6 | ICM Box Timer | 00–60 (2 digits) | 30 (sec) | Select the ringing time of the ICM box associated stations, when ICM box user press [CALL] button. |
| | 7 | ICM Dial Tone Timer | 01–20 (2 digits) | 10 (sec) | This timer is used when the off-hooked station is heard the intercom dial tone. If station doesn't dial a digit within this timer, error tone is provided. |
| | 8 | Inter Digit Timer | 01–20 (2 digits) | 05 (sec) | This timer is used when station is dialing some digits. The time between digits cannot exceed Inter-digit timer, or error tone is provided. |
| | 9 | MSG Wait Reminder Tone Timer | 00–60 (2 digits) | 00 (min) | Select the amount of time between repeated reminder tones to station that it has a message waiting. |
| | 10 | Paging Timeout Timer | 000–255 (3 digits) | 000 (sec) | Select the maximum time of a page. The system will automatically disconnect the page at the end of this time unless the caller has hung up earlier. |
| | 11 | Pause Timer | 1–9 (1 digit) | 3 (sec) | This timer is used at the speed dialing feature, LNR, and etc. In case of the speed dial or LNR, ipLDK system sends the dial digits to the outgoing CO line, after this time. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 12 | Preset Call Forward Timer | 00–99 (2 digits) | 10 (sec) | This timer is used at the Preset Call Forward feature (Feature Description and Operation Manual Section 2.3.1.9). After this timer expires, incoming call will be forwarded to a predetermined station. |
| | 13 | SLT DTMF Release Timer | 00–20 (2 digits) | 00 (sec) | DTMF RCVR will be released after this timer when SLT makes an outgoing CO call. |
| | 14 | 3Soft Auto Release Timer | 01–30 (2 digits) | 05 (sec) | This timer is used only in 3soft BTN DKTU (LDH-30DH). In 3soft menu, if no digits are entered within time, the DKTU turn to Idle state. |
| | 15 | VM Pause Timer | 01–90 (2 digits) | 30 (100ms) | In-band digit stream is sent to external VM after this timer. |
| | 16 | Transit Connect Timer | 1–30 | 04 | Master sends the connect message to slave system after timer when the transit out CO type is a pulse analog trunk. |
| | 17 | VMIB Message Forward/Rewind | 1–99 | 05 (sec) | VMIB message is rewound as this timer. |
| | 18 | LCO Connect Timer | 0–20 | 0 (sec) | If this timer expires after starting outgoing dial, the system regards that line as connected. If there are extra digits after timer expires, the Pause is automatically added before the first added digit (CIS only). |
| | 19 | LCO CPT Detect Timer | 0–20 | 5 (sec) | To check LCO status after LCO is connected, system assigns CPT periodically with timer. To activate timer, CO – CO XFER CPT detect (PGM160 – F16) should be set to ON. |
| | 20 | Forward To VMIB Timer | 20-60 | | If Auto Fwd To VMIB feature (PGM113 – F14) is set to a station, the call is automatically forwarded to VMIB after this timer expired, so the caller can leave a voice message. |
| 182 | 1 | SLT Hook Switch Bounce Timer (SLT Only) | 01–25 (2 digits) | 01 (100ms) | Select the length of time that is needed to regard as a valid on-hook or off-hook. |
| | 2 | SLT Maximum Hook Flash Timer (SLT Only) | 001-250 (3 digits) | 06 (10ms) | Select how long the user could press the hook switch in order for it to be considered a FLASH (Timed-Break Recall) (for SLT). |
| | 3 | SLT Minimum Hook Flash Timer (SLT Only) | 000–250 (3 digits) | 020 (100ms) | The minimum bound time that system considers as hook flash. |
| | 4 | SLT Ring Phase Timer (SLT Only) | 2–5 (1 digit) | 4 (sec) | Select the ring phase (cadence) of SLT.<br>(5 sec. = 1 sec. ON / 4 sec. OFF) |
| | 5 | Station Auto Release Timer | 020–300 (3 digits) | 060 (sec) | If a station hears ring back tone and no action is taken, this timer is assigned. When this timer is expired, the station is released. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 6 | Unsupervised Conference Timer | 00 – 99 (2 digits) | 10 (min) | Select the amount of the time that an unsupervised conference can continue after the initiator of the conference has exited the conference. |
| | 7 | Wake-Up Fail Ring Timer | 00 – 99 (2 digits) | 20 (sec) | After a Wake-up fail ring invokes on system attendant, the alarm ring exists during this timer. If this timer expires, the alarm ring will be disappeared. |
| | 8 | Warm Line Timer | 01 – 20 (2 digits) | 05 (sec) | User takes no action after lifting handset or pressing the [MON] button and this timer is expired, then idle line selection for warm line is executed. |
| | 9 | Wink Timer | 010 – 200 (3 digits) | 010 (10ms) | The time duration of seize acknowledge signal to DID line. |
| | 10 | Enblock Digit Timer | 01-20 (2 digits) | 15 (sec) | This timer is used at the enblock dialing sending feature. If station user make a call at the enblock dialing mode, and if station user doesn't dial within this time, then the enblock dialing is executed. |
| | 11 | CCR Time Out Timer | 000-300 (3 digits) | 015 (sec) | When this timer is expired, CCR is activated. |
| | 12 | DID Inter Digit Timer | 01-20 (2 digits) | 03 (sec) | This timer is used at DID type 2 feature. In DID type2, ipLDK system will be wait the new DID digit receiving until this timer is expired. If this timer is expired, the call routing of DID type 2 is executed. |
| 183 | | In Room Indication | | | |
| | 1 | In Room Indication Supervisor | Station | - | Supervisor Activates In-Room Indication button |
| | 2 | In Room Indication Member | Station | - | Members can check if In-Room Indication button is On or OFF. |
| 184 | | Chime Bell Attribute | | | |
| | 1 | Chime Bell Pair | Station Pair | - | If Master Station presses the Chime Bell button, the paired Station will ring. |
| | 2 | Chime Bell Relay | 4 (ipLDK-100/300/300E)<br>2 (ipLDK-20) | - | If Chime Bell Relay is set, LBC is activated when paired Station receives Chime Bell Ring. |
| | 3 | Chime Bell Timer | 1-20 | | Chime Bell Ring stops when this timer expires. |
| | 4 | Chime Bell Frequency | F1-F2 | | Chime Bell Frequency can be adjusted. |

## 4.3.17 CIDU SETTING

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 185 | | CIDU Setting | | | |
| | 1 | CIDU USAGE | ON / OFF | ON | If this value is set to ON, CIDU information is sent. |
| | 2 | CID Name Display | NAME(1)/ TEL NO(0) | TEL NO(0) | According to this ADMIN program value, LCD displayed data can be selected. |
| | 3 | Serial Port Select | 1-4 | - | Set the port connected to CIDU hardware device. |
| | 4 | CID/ Co Port Mapping | 000-063 | - | Set the CIDU port and the analog CO line port mapping. |
| | 5 | Initialize CID Data | | | |
| | 6 | CID Type2 Usage | ON/OFF | OFF | Set the CIDU port and the analog CO line port mapping. |
| | 7 | Fast CID Mode | ON/OFF | OFF | If this value is set to ON, system provides a ring signal to SLT and CID will be displayed after 1st ringing. |

## 4.3.18 DCOB ATTRIBUTE

*(Not available in ipLDK-20)*

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 186 | | DCOB System Attributes | 1-17 | | |
| | 1 | DCOB CO Type | | | This ADMIN program is moved to PGM187–FLEX 4. |
| | 2 | Metering Type | 0-1 | 0 | Select DCO call metering signal type. |
| | 3 | R2 OUT Manage Timer | 01-50 | 14 | In R2-DCO signaling, maximum time for waiting for forward signal from PX (1 sec based). |
| | 4 | R2 IN Manage Timer | 01-50 | 14 | In R2 signaling, maximum time for waiting for forward signal from PX (1 sec based). |
| | 5 | R2 Disappear Timer | 01-50 | 14 | 1 sec based. |
| | 6 | R2 Pulse Timer | 01-30 | 7 | In R2 signaling, time duration to send pulse typed R2 signal (20 msec based). |
| | 7 | R2 Ready Timer | 000-500 | 7 | 20 msec based. |
| | 8 | Dial Tone Delay Timer | 01-30 | 20 | 1 sec based. |
| | 9 | Line Status | 1-9 | 6 | Free Line. |
| | 10 | Calling Category | 1-9 | 1 | User no priority. |
| | 11 | DNIS Service | ON/OFF | OFF | Request the CID to the calling party. |
| | 12 | CLI Digit Number | 01-10 | 4 | Reserved. |
| | 13 | R2 Out Digit Timer | 01-50 | 5 | If outgoing dial is not performed within this timer, the R2 outgoing call is failed. |
| | 14 | R2 Error Prompt Usage | ON/OFF | OFF | If R2 outgoing call is made and the error signal is received, then the caller hears the error announce via VMIB. |
| | 15 | R2 Busy Prompt Usage | ON/OFF | OFF | If R2 outgoing call is made and the busy signal is received, then the caller hear the busy announce via VMIB. |
| | 16 | R2 Announce Prompt Usage | ON/OFF | OFF | If R2 outgoing call is made and the announcement signal is received, then the caller hears the error announce via VMIB. |
| | 17 | DCO Gain | 1 – 63 | | |
| 187 | | DCOB CO Line Attributes | CO Line Range | | |
| | 1 | IN Digit Type | 0-2 | 2 (R2MFC) | Select the incoming digit information signaling type of DCO. |
| | 2 | OUT Digit Type | 0-2 | 2 (R2MFC) | Select the outgoing digit information signaling type of DCO. |
| | 3 | CLI Digit Number | 01-15 | 10 | Set the digit numbers received for CLI. |
| | 4 | DCOB CO Type | 0-2 | 2 | 0 = DID & DOD / 2 = DID Only |
| | 5 | SND S-Block CMD | ON/OFF | OFF | If this value is set to ON, the DCO line send S-Block command to PX. |

## 4.3.19 STATION GROUP ASSIGNMENT

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 190 | | Station Group Number | STA Group # | - | |
| | 1 | Group Type | 0-6 | 0 | Hunt group type can be selected among circular/terminal/UCD/ring/VM/pick-up/networking VM. |
| | 2 | Pick-up Attribute | ON/OFF | OFF | This value is used to assign the pick-up attribute for Hunt groups.<br>Except Pick-up Hunt group, all types of Hunt group can be assigned the pick-up attribute optionally. |
| | 3 | Member Assignment | Not Assigned | - | This member assignment process can be executed in two ways:<br>Individually assigning by pressing the Flexible Button which user wants to assign and then entering the station number, or assigning successively by entering the first station number and last station number. |

## 4.3.20 STATION GROUP PROGRAM

| PGM | ITEM | FLEX | SUB-ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|---|
| 191 | Circular Group/ Terminal Group | 1 | VMIB Announce 1 Timer | 000-999 | 015 (sec) | If the call doesn't answer during this timer, the system plays VMIB announcement that is programmed at PGM191 – FLEX 3. |
| | | 2 | VMIB Announce 2 Timer | 000-999 | 000 (sec) | The second VMIB announcement can be played if the call continues to wait beyond the 2nd Announcement timer. The played VMIB announcement can be programmed at PGM191 – FLEX 4. |
| | | 3 | VMIB Announce 1 Location | 00-70 | 00 (Not Assigned) | Used to play the VMIB announcement, when the VMIB Announce 1 timer expires. |
| | | 4 | VMIB Announce 2 Location | 00-70 | 00 (Not Assigned) | Used to play the VMIB announcement, when the VMIB Announce 2 timer expires. This second VMIB announcement can be played repeatedly, according to PGM191 – FLEX 5 and 6 value. |
| | | 5 | VMIB Announce 2 Repeat timer | 000-999 | 000 (sec) | Used to repeat the VMIB Announce 2 when the timer expires. (000 = Not assigned). |
| | | 6 | VMIB Announce 2 Repeat E/D | ON / OFF | OFF | This value is used to enable or disable VMIB Announce 2 Repeat. |
| | | 7 | Overflow Destination | STA#/ HUNT#/ VMIB#/ SYS SPD# | - | The call to a station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to this overflow station/group/ VMIB/System Speed bin, after overflow timer expiring. The overflow timer can be set at PGM191 – FLEX 8. |
| | | 8 | Overflow Timer | 000-600 | 180 (sec) | If this timer expires after a call is received in the group, the call is routed to the overflow destination.<br>The overflow destination can be set at ADMIN program 191 – FLEX 7. |
| | | 9 | Wrap-up Timer | 002-999 | 002 (sec) | A station in a hunt group is maintained in a busy state during this timer value, after the end of received call and outgoing call for the assigned wrap-up time. |

| PGM | ITEM | FLEX | SUB-ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|---|
| | | 10 | No Answer Timer | 00-99 | 15 (sec) | In circular/terminal hunt, if the incoming call is not answered during this time, the call is routed to the next idle station in the group. |
| | | 11 | Pilot Hunt | ON / OFF | ON | If this value is set ON, the call to the each hunt group member is processed as the call to hunt group.<br>A circular/terminal hunt group can be assigned with a pilot number (the station group) so that only calls to the pilot number will hunt. |
| | | 12 | Alt If No Member | ON / OFF | OFF | If there is no member on duty, intercom call will be dropped and CO incoming call will be routed to overflow destination, or to ring assigned station if overflow destination is not assigned. |
| | | 13 | Music Source | 00 – 13 (ipLDK-300/300E)<br>00 – 12 (ipLDK-100)<br>0 – 8 (ipLDK-20) | 00 (Not Assigned) | If music source is assigned, calling user will be heard music instead of ring back tone. |
| | | 14 | Alternate Destination | Station/Hunt Group | - | When a call is received in the group and there is no available station in the group, then the call will be routed to this destination if assigned. |
| | | 15 | Max Queue Call Count | 00-99 | 99 | This value is the maximum call count that can be queued.<br>If the total queued call count is this value, the next queuing tried call will be disconnected. |
| | | 16 | Hunt Member forward | ON/OFF | OFF | OFF = receive Hunt Call,<br>ON = not receive Hunt Call. |
| | | 17 | Queue Count Display | ON/OFF | ON | If this value is set to ON, Hunt member can check the Queue Count. |
| | | 18 | Group Name Assign | Max 12 digit | Null | Group name can be assigned. |
| | UCD Group | 1 | VMIB Announce 1 Timer | 000-999 (3 digits) | 015 (sec) | If the call is not answered during this timer, the system will play the VMIB announcement that is programmed at PGM191 – FLEX 3. |
| | | 2 | VMIB Announce 2 Timer | 000-999 (3 digits) | 000 (sec) | The second VMIB announcement can be played if the call continues to wait beyond the 2nd announcement timer. The played VMIB announcement can be programmed at PGM191 – FLEX 4. |
| | | 3 | VMIB Announce Location 1 | 00-70 | 00 (Not Assigned) | This is used to play VMIB announcement, when the VMIB announce 1 timer expires. |
| | | 4 | VMIB Announce Location 2 | 00-70 | 00 (Not Assigned) | This is used to play VMIB announcement, when the VMIB Announce 2 timer expires. This second VMIB announcement can be played repeatedly, according to PGM191 – FLEX 5 and 6 value. |
| | | 5 | VMIB Announce 2 Repeat | 000-999 | 000 (sec) | This is used to repeat VMIB Announce 2 when the timer expires (000 = Not repeat). |
| | | 6 | VMIB Announce 2 Repeat E/D | ON/OFF | OFF | This value is used to enable or disable VMIB Announce 2 Repeat. |

| PGM | ITEM | FLEX | SUB-ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|---|
| | | 7 | Overflow Destination | STA #/ HUNT#/ VMIB#/ SYS SPD# | - | The call to a station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to this overflow station/group/ VMIB/System Speed bin, after overflow timer expires. The overflow timer can be set at PGM191 – FLEX 8. |
| | | 8 | Overflow Timer | 000-600 (3 digits) | 180 (sec) | If this timer expires after a call is received in the group, the call is routed to the overflow destination.<br>The overflow destination can be set at PGM191 – FLEX 7. |
| | | 9 | Wrap Up Timer | 002-999 (3 digits) | 002 (sec) | A station in a hunt group is maintained in a busy state during this timer value, after the end of received call and outgoing call for the assigned wrap-up time. |
| | | 10 | Alt If No Member | ON/OFF | OFF | If there is no member on duty, intercom call will be dropped and CO incoming call will be routed to overflow destination, or to ring assigned station if overflow destination is not assigned. |
| | | 11 | Music Source | 00 – 13 (ipLDK-300/300E)<br>00 – 12 (ipLDK-100)<br>0 – 8 (ipLDK-20) | 00 | If music source is assigned, calling user will be heard music instead of ring back tone. |
| | | 12 | ACD Warning Tone | ON/OFF | ON | When a call is received in the group and there is no available station in the group, then the call will be routed to this destination if assigned. |
| | | 13 | Alternate Destination | STA #/ HUNT # | - | When a call is received in the group and there is no available station in the group, then the call will be routed to this destination if assigned.<br>But it must be avoided to program the alternate destination as the hunt group itself. For example, the alternate destination of Group 620 should not be Group 620. |
| | | 14 | Supervisor Timer | 000-999 (3 digits) | 030 (sec) | If there is no idle member at Hunt group, the incoming call will be queued.<br>If the total queued call count is more than the supervisor call count value, and ACD queued call ADMIN program value is set to ON, and the queued time is longer than this timer, then the counts of queued calls will be displayed onto supervisor's LCD.<br>The supervisor call count can be programmed at PGM191 – FLEX 15.<br>The ACD queued call can be programmed at PGM191 – FLEX 16. |
| | | 15 | Supervisor Call Count | 00-99 (2 digits) | 00 | If the number of queued calls is more than this call count, the supervisor timer will be started.<br>The supervisor timer can be programmed at PGM191 – FLEX 14. |
| | | 16 | ACD Queued Call | ON/OFF | OFF | If this value is set to ON, the count of queued call can be displayed on supervisor station LCD. |

| PGM | ITEM | FLEX | SUB-ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|---|
| | | 17 | MAX Queue Call Count | 00-99 | 99 | This value is the maximum call count that can be queued.<br>If the total queued call count is this value, the next attempted queued call will be disconnected. |
| | | 18 | Supervisor | STA # | - | This value is used to set the supervisor station. |
| | | 19 | UCD Hunt Stations Priority | 0-9 (1 digit) | 0 | This value is used to set UCD group member's priority.<br>The value of 0 is the highest priority, and the value of 9 is the lowest priority.<br>Stations with the highest priority receive the incoming calls first. |
| | | 20 | Hunt Member Forward | ON/OFF | OFF | OFF = receive Hunt Call,<br>ON = not receive Hunt Call. |
| | | 21 | UCD DND Timer | 00-60 | 00 (sec) | If this timer set to 00 sec, this timer is not operated.<br>If this timer is set to 10, after 10 sec ringing UCD member is automatically UCD DND state. |
| | | 22 | Queued Tone | ON/OFF | OFF | If this value is set to ON, Mute ring is served to UCD group first member, when call is queued.<br>This mute ring is served only one time during 0.4 sec. |
| | | 23 | Group Name Assign | Max 12 digit | Null | Group name can be assigned. |
| | Ring Group | 1 | VMIB Announce 1 Timer | 000-999 | 015 (sec) | If the call isn't answered during this timer, the system plays VMIB announcement that is programmed at PGM191 – FLEX 3. |
| | | 2 | VMIB Announce 2 Timer | 000-999 | 000 (sec) | The second VMIB announcement can be played if the call continues to wait beyond the 2nd announcement timer. The played VMIB announcement can be programmed at PGM191 – FLEX 4. |
| | | 3 | VMIB Announce 1 Location | 00-07 | 00 (Not Assigned) | This is used to play VMIB announcement, when the VMIB announce 1 timer expires. |
| | | 4 | VMIB Announce 2 Location | 00-07 | 00 (Not Assigned) | This is used to play VMIB announcement, when the VMIB Announce 2 timer expires. This second VMIB announcement can be played repeatedly, according to PGM191 – FLEX 5 and 6 value. |
| | | 5 | VMIB Announce 2 Repeat timer | 000-999 | 000 (sec) | This is used to repeat VMIB announce 2 when the timer is expired (000 = Not repeat). |
| | | 6 | VMIB Announce 2 Repeat E/D | ON/OFF | OFF | This value is used to enable or disable VMIB Announce 2 Repeat. |
| | | 7 | Overflow Destination | STA #/ HUNT#/ VMIB #/ SYS SPD# | - | The call to a station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to this overflow station/group/ VMIB/System Speed bin, after overflow timer expires. The overflow timer can be set at PGM191 – FLEX 8. |
| | | 8 | Overflow Timer | 000-600 | 180 (sec) | If this timer expires after a call is received in the group, the call is routed to the overflow destination.<br>The overflow destination can be set at PGM191 – FLEX 7. |
| | | 9 | Wrap Up Timer | 002-999 | 002 (sec) | A station in a hunt group is maintained in a busy state during this timer value, after the end of received call and outgoing call for the assigned wrap-up time. |

| PGM | ITEM | FLEX | SUB-ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|---|
| | | 10 | Music Source | 00 – 13 (ipLDK-300/300E) 00 – 12 (ipLDK-100) 0 – 8 (ipLDK-20) | 00 | If music source is assigned, calling user will be heard music instead of ring back tone. |
| | | 11 | Max. Queued Call Count | 00-99 | 99 | This value is the maximum call count that can be queued. If the total queued call count is this value, the next queuing tried call will be disconnected. |
| | | 12 | Supervisor | STA # | - | This value is used to set the supervisor station. |
| | | 13 | Hunt Member forward | ON/OFF | OFF | OFF = receive Hunt Call, ON = not receive Hunt Call. |
| | | 14 | Queue Count Display | ON/OFF | ON | If this value is set to ON, Hunt member can check the Queue Count. |
| | | 15 | Group Name Assign | Max 12 digit | Null | Group name can be assigned. |
| | VM Group | 1 | Wrap-up Timer | 002-999 (3 digits) | 002 (sec) | A station in a Hunt group is maintained in a busy state during this timer value, after the end of received call and outgoing call for the assigned wrap-up time. |
| | | 2 | Put Mail Index | 1-4 | 1 | This index is one of the voice mail dialing tables. |
| | | 3 | Get Mail Index | 1-4 | 2 | This index is one of the voice mail dialing tables. |
| | | 4 | Hunt Type | Cir/Term | Term | This value is used to set the hunt type of the VM member. |
| | | 5 | SMDI Port | 01-14 (ipLDK-300/300E) 01-12 (ipLDK-100) 01-10 (ipLDK-20) | 02 (COM2) 01 (COM1) | Simplified Message Desk Interface (SMDI) determines the distribution information of VM. This value is used to set SMDI print port. |
| | | 6 | Overflow Timer | 000-600 (3 digits) | 180 (sec) | If this timer expires after a call is received in the group, the call is routed to the overflow destination. The overflow destination can be set at PGM191 – FLEX 7. |
| | | 7 | Overflow Destination | STA #/ HUNT#/ VMIB #/ SYS SPD# | - | The call to a station in the group will continue to route until answered or each station in the group has been tried. The call will remain at the last station in the group or will be passed to this overflow station/group/ VMIB/System Speed bin, after overflow timer expiring. The overflow timer can be set at PGM191 – FLEX 6. |
| | Pick-up Group | 1 | Auto Pick-up | ON/OFF | OFF | If this value is set to ON, and if there is ringing hunt member, other hunt member can pickup the call automatically only by pressing **[MON]** button or off-hook. |
| | | 2 | All Group Member Ringing | ON/OFF | OFF | If this value is set to ON, and if a hunt group member receives an intercom call, then all hunt group member is ringing. To set this value, 'Auto Pickup' ADMIN program value must be set to ON. |

## 4.3.21 ISDN ATTRIBUTES

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 200 | 1 | Advice of Charge | 0-6 | 0 | The AOC is the call cost information service that is provided by public ISDN.<br>According to the country, the standard of AOC type is different.<br>This value is used to set AOC type. |
| | 2 | CO ATD Code | Max. 2 Digits | - | This value is used when ISDN DID call incoming and outgoing case.<br>If the received DID digit is matched this value, then the call is routed to attendant station.<br>If PGM114 – FLEX 5 is set to CO ATD, and the station makes an outgoing CO call, then this value is used as the outgoing station's CLI data. |
| | 3 | Reserved | - | - | |
| | 4 | Reserved | - | - | |
| | 5 | Reserved | - | - | |
| | 6 | CLI Print | ON/OFF | OFF | This value is used to execute the CLI print about the incoming CO call.<br>If this value is set to ON, the CLI of the incoming CO call will be sent to serial/MODEM/LAN port. |
| | 7 | International Access Code | Max 4 digits | - | This value is used to modify the received CLI of the international incoming CO call.<br>If this value is set, and if station receives the international incoming CO call, then this value is inserted in front of the CLI. |
| | 8 | Reserved | - | - | |
| | 9 | My Area Code | Max 6 digits | - | This value is used to set My Area Code.<br>The combination of this value and PGM200 – FLEX 10 is compared with the received CLI, and the received CO call can be judged the local call or the long distance call.<br>This value is also used the outgoing CLI data, when station makes an outgoing CO call. |
| | 10 | My Area Prefix Code | Max 4 digits | - | This value is used to set the My Area Prefix Code. (normally zero value)<br>The combination of this value and PGM200 – FLEX 9 is compared with the received CLI, and the received CO call can be judged the local call or the long distance call.<br>This value is also used the outgoing CLI data, when station makes an outgoing CO call. |
| | 11 | Maintain DID Name | ON/OFF | OFF | This value is used at the CLI display of incoming DID CO call.<br>If the incoming DID call has CLI, it is displayed on station LCD only ringing time.<br>If this value is set to ON, CLI display is maintained when the call is answered. |
| | 12 | PC Application Destination Station | | STN 100 | This value is used the valid destination station about PC application connection request. |
| 201 | - | COLP Table | Max. 10 digits | - | COLP table is used when makes the outgoing CLI.<br>The method of making CLI is explained in the **Feature Description and Operation manual**, Section 2.14.2.<br>At this value, the maximum 50 CLI data can be programmed at PGM143 – FLEX 1 and 2. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 202 | - | MSN Table | Entry No.(000-249) | - | MSN (Refer to **Feature Description and Operation manual** Section 2.14.7 and 2.14.8) is defined one of ISDN CO line service.<br>In the ipLDK system, maximum 250 MSN table entries can be programmed.<br>Each MSN table entry has MSN 'CO line number', 'Index of flexible DID table', 'Sub-address number', and 'Telephone number'. |
| | 1 | CO Line number | 01-08 | - | Used to set CO line that is assigned MSN service. |
| | 2 | Index of Flexible DID Table | 000-999 | - | If the received digit of Incoming CO call is matched MSN telephone number (PGM202 – FLEX 4), it is MSN call.<br>This value is used to search the destination of MSN call routing.<br>This value indicates the entry index of flexible DID table (PGM231). |
| | 3 | SUB Number | 0-9 | - | This value is only used when the destination station type is ISDN telephone.<br>If the destination is ISDN telephone, this value is sent as the ISDN sub-address number of it. |
| | 4 | TEL number | 20 digits | - | This value is ISDN MSN number.<br>If the received digit of Incoming CO call is matched with this value, it is MSN call. |
| 203 *(ipLDK -20 Only)* | 1 | TEI type | Fixed/Auto | Auto | This value controls the type of Terminal Equipment Identification. |
| | 2 | Service Type | Keypad/Functional | Keypad | This sets the service type for ISDN supplementary services. |
| | 3 | Hold Code | Max. 10 digits | *75# | This stores the code for ISDN supplementary HOLD. |
| | 4 | Retrieve Code | Max. 10 digits | *76# | This stores the code for ISDN supplementary RETRIEVE. |
| | 5 | B Channel Selection Type *(Italy Only)* | Prefer/Extend | Extend | |
| | 6 | ISDN Call Barring Up *(Italy Only)* | Max. 10 digits | #33* | |
| | 7 | ISDN Call Barring Down *(Italy Only)* | Max. 10 digits | *33# | |
| | 8 | ISDN CFU Activation Code *(Italy Only)* | Max. 10 digits | *21* | |
| | 9 | ISDN CFU Deactivation Code | Max. 10 digits | #21# | |
| | 10 | ISDN Memo-Tel Activation Normal Code *(Italy Only)* | Max. 10 digits | *63# | |
| | 11 | ISDN Memo-Timer Code *(Italy Only)* | Max. 10 digits | *****63*0*1# | |
| | 12 | ISDN Memo-Tel Activation LNR Code *(Italy Only)* | Max. 10 digits | *****63*1# | |
| | 13 | ISDN Memo-Tel Interrogation Code *(Italy Only)* | Max. 10 digits | *# 63# | |
| | 14 | ISDN Memo-Tel Retrieve MSRG Code *(Italy Only)* | Max. 10 digits | *# 64# | |
| | 15 | ISDN Memo-Tel Deactivation Code *(Italy Only)* | Max. 10 digits | # 63# | |

## 4.3.22 LCR TABLE ASSIGNMENT

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 220 | 1 | LCR Access Mode | 1-6 | Disable (M00) | This value is used to select LCR access mode. Each access mode is explained in **Feature Description and Operation manual**, Section 2.2.7. |
| | 2 | Set the Day of week zone | | 1234567 | Each day can use a different LCR setting. At this ADMIN program, each day can be grouped in up to 3 zones. |
| | | MON | 1–3 | 1 | |
| | | TUE | 1–3 | 1 | |
| | | WED | 1–3 | 1 | |
| | | THUR | 1–3 | 1 | |
| | | FRI | 1–3 | 1 | |
| | | SAT | 1–3 | 1 | |
| | | SUN | 1–3 | 1 | |
| | 3 | Set the Time Zone of Day Zone 1 | | | Each time of day zone1 can uses a different LCR setting. At this ADMIN program, each time of day zone1 can be grouped in up to 3 zones. |
| | | Time Zone1 | 00–24 | 0024 | |
| | | Time Zone2 | 00–24 | - | |
| | | Time Zone3 | 00–24 | - | |
| | 4 | Set the Time Zone of Day Zone 2 | 00–24 | | Each time of day zone 2 can use different LCR setting. At this ADMIN program, each time of day zone1 can be grouped in up to 3 zones. |
| | | Time Zone1 | 00–24 | 0024 | |
| | | Time Zone2 | 00–24 | | |
| | | Time Zone3 | 00-24 | | |
| | 5 | Set the Time Zone of Day Zone 3 | | | Each time of day zone 3 can use different LCR setting. At this ADMIN program, each time of day zone1 can be grouped in up to 3 zones. |
| | | Time Zone1 | 00–24 | 0024 | |
| | | Time Zone2 | 00–24 | | |
| | | Time Zone3 | 00–24 | | |
| 221 | | Leading Digit Table | 000-249 | | Refer to ipLDK **Feature Description and Operation Manual**, Section 2.7 |
| | 1 | LCR Type | 1–3 | 3 | This value is used to select the LCR type. |
| | 2 | LCR Code (leading digit) | Max 12 digits | - | If digits dialed by user are equal to this value, the digits are converted and CO line is seized according to DMT (PGM 222). |
| | 3 | Day Zone 1 DMT | 6 digits | - | This value is used to set the table index DMT (PGM222) of the day zone 1. Because day zone 1 has 3 different time zones, three table index of each time must be selected. |
| | 4 | Day Zone 2 DMT | 6 digits | - | This value is used to set the table index DMT (PGM222) of the day zone 2. Because day zone 2 has 3 different time zones, three table index of each time must be selected. |
| | 5 | Day Zone 3 DMT | 6 digits | - | This value is used to set the table index DMT (PGM222) of the day zone 2. Because day zone 2 has 3 different time zones, three table index of each time must be selected. |
| | 6 | Check password | ON/OFF | OFF | If this value is set to ON, ipLDK system request the account code of user, when dialed digit is matched LCR code. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 222 | | Digit Modification Table | 00-99 | | Refer to ipLDK **Feature Description and Operation Manual**, Section 2.7. |
| | 1 | Added Digit | Max 20 digits | | This value is used to add digit stream at user dialed digits.<br>This value is added at the position of Add Position (PGM222 – FLEX 4). |
| | 2 | Removal Position | 1–12 | 1 | This value is used to set the removal position at user dialed digits.<br>Some digits are removed from this position up to the Remove Number (PGM222 – FLEX 3). |
| | 3 | Number Of Remove | 01–12 | 00 | This value is used to set the remove digit count at user dialed digits.<br>Some digits are removed as much as this value from the position of Removal Position (PGM222 – FLEX 2). |
| | 4 | Add Position | 1–13 | 1 | This value is used to set the add position at user dialed digits.<br>Some digits are added from this position with Add Digit Stream (PGM222 – FLEX 1). |
| | 5 | CO Line Group | 1-24 | 1 | This value is used when LCR call seize the outgoing CO line.<br>The idle CO line within CO Line Group of this value is seized for LCR call. |
| | 6 | Alternative DMT Index | 00–99 | - | This value is used when LCR call can't seize the idle CO line within PGM222 – FLEX 5.<br>If LCR call can't seize the idle CO line within LCR CO Line Group, LCR call seizes the idle CO within CO Line Group of this value DMT index. |
| 223 | | LCR Table Initialization | | | This ADMIN program changes all LCR ADMIN table entry value to new value. |
| | 1 | DMT Of Day_Zone_1 | 6 digits | | This ADMIN program changes the index of DMT value of day Zone 1 to new value. |
| | 2 | DMT Of Day_Zone_2 | 6 digits | | This ADMIN program changes the index of DMT value of day zone 2 to new value. |
| | 3 | DMT Of Day_Zone_3 | 6 digits | | This ADMIN program changes the index of DMT value of day zone 3 to new value. |
| | 4 | CO Group Initialize | 1 – 24 | | This ADMIN program changes the all CO Line Group values of DMT entry to new value. |
| | 5 | Alternative Index Initialize | 0 – 99 | | This ADMIN program changes the all Alternative DMT Index values of DMT entry to new value. |
| | 6 | Initialize All LCR | | | This ADMIN program initializes all LCR ADMIN data to default value. |

## 4.3.23 TOLL TABLE ASSIGNMENT

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 224 | | Toll Table | | | |
| | 1 | Allow Table A (01-30) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 2 and COS 4 station is matched with the allowed toll pass digits or not. Allow table A is only used when the COS of dialed station is COS 2 or 4. |
| | 2 | Deny Table A (01-30) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 2 and COS 4 Station is matched with the denied toll pass digits or not. Deny table A is only used when the COS of dialed station is COS 2 or 4. |
| | 3 | Allow Table B (01-30) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 3 and COS 4 Station is matched with the allowed toll pass digits or not. Allow table B is only used when the COS of dialed station is COS 3 or 4. |
| | 4 | Deny Table B (01-30) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 3 and COS 4 Station is matched with the denied toll pass digits or not. Deny table B is only used when the COS of dialed station is COS 3 or 4. |
| | 5 | Allow Table C (01-50) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 8, 10, and 11 Station is matched with the allowed toll pass digits or not. |
| | 6 | Deny Table C (01-50) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 8, 10, and 11 Station is matched with the allowed toll pass digits or not. |
| | 7 | Allow Table D (01-50) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 9, 10, and 11 Station is matched with the allowed toll pass digits or not. |
| | 8 | Deny Table D (01-50) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 9, 10, and 11 Station is matched with the allowed toll pass digits or not. |
| 225 | | Canned Toll Table | | | |
| | 1 | Allow Table (01-20) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 5 and COS 6 Station is matched with the allowed toll pass digits or not. Allow table of canned toll is only used when the COS of dialed station is COS 5 or 6. |
| | 2 | Deny Table (01-20) | Max 14 digits | - | This ADMIN value is used to check, whether the dialed digit by COS 5 and COS 6 Station is matched with the denied toll pass digits or not. Deny table of canned toll is only used when the COS of dialed station is COS 5 or 6. |
| 226 | | Emergency service call (01-10) | Max 14 digits | | Maximum 10 emergency codes can be programmable. |

## 4.3.24 OTHER TABLES

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 227 | | Author Code Table | 0001–2000 (ipLDK-300E) 0001–1000 (ipLDK-300) 001 – 500 (ipLDK-100) 001-200 (ipLDK-20) | | Authorization code table entries consist of each station password and extra account codes. The table entries from 001 to the maximum capacity of station numbers are saved the password of each station. And the remains are the extra entries. CO Line Groups can be marked to deny access until a matched Authorization code is entered. In this case, DND warning tone is provided when the CO Line Group access code is dialed. If the dialed Authorization code is verified, you will hear CO dial tone. Otherwise, you will hear error tone and cannot access the group. Stations or ADMIN programming can enter the authorization codes (Below MPB ver. 2.0A, Authorization code is fixed 5 digits). Administrator can see and change station's password. There can be no duplicate entries. |
| | | Table Entry (001-200) | 3-11 digits | Not Assigned | |
| | | Day COS | | | Served only when bin number is matched with station physical number. |
| | | Night COS | | | Served only when bin number is matched with station physical number. |
| 228 | | CCR Table | 1-70 | | |
| | 1 | Station | STA # | - | Determines if the call is ringing at station of this value. |
| | 2 | Hunt Group | HUNT # | - | Determines if the call is ringing at member station of this value Hunt group. |
| | 3 | VMIB | Announce # | - | Determines if VMIB announcement of this value is played to the caller. |
| | 4 | VMIB Drop | Announce # | | Determines if VMIB announcement of this value is played to the caller and the call is disconnected when VMIB announcement ended. |
| | 5 | System Speed | 2000-2499 | - | Determines if the call is routed to the system speed telephone number. |
| | 6 | Internal Page | 1-10 | - | Determines if the call can page to the internal page zone of this value. |
| | 7 | External Page | 1 | - | Determines if the call can page to the external page zone of this value. |
| | 8 | All Call Page | 1–2 | - | Determines if the call can page to the all page zone. |
| | 9 | Net Number | Net Number | | Determines the call can be routed to another net station. |
| | 10 | Conference Room | 1–9 | - | Determines if the call can join the conference room. |
| | 11 | Station Voice Mail Box | STN # | | Determines if the call is directly routed to station voice mail box of this value. |
| 229 | | Executive/Secretary Table | 1-6(ipLDK-20) 1-12(ipLDK-100) 1-36 (ipLDK-300/300E) | Not Assigned | When the Executive designated Station is in DND state, intercom and transfer calls will be automatically routed to the designated Secretary Station. |
| | 1 | Executive Secretary Pair | | | When the Executive Station is in DND state, calls automatically will be routed to the Secretary Station. |
| | 2 | CO Call to Secretary | ON/OFF | OFF | If this feature is set to ON, each incoming CO call to the Executive is automatically routed to the Secretary, even when Executive is in DND state. |
| | 3 | Secretary DND | ON/OFF | OFF | In some locations (Korea, Israel, India, and Turkey), every ICM call to the Executive is routed to the Secretary regardless of the Executive state. However, if Secretary Station |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | | | | | is set to DND, each call to the Executive is not forwarded to the Secretary. |
| | 4 | Executive Grade | 1 (highest) – 12 (lowest) | 1 | In some locations (Korea, Israel, India, and Turkey), every ICM call to the Executive is routed to the Secretary regardless of the Executive state (only Stations of equal or higher level can directly call an idle Executive Station). |
| 231 | - | Flexible DID Table | Entry No. (000-999) | - | |
| | 1 | DID Name | Max 11 chars. | - | Used to save the name of incoming DID call. This value is displayed on station LCD, when station receive the DID call. |
| | 2 | Day Destination | STA # / Hunt # / VMIB # / VMIB # drop SPD<br><br>Int Page<br>Ext Page<br>All Page<br>Net Num<br>Conf Room<br>Station Voice Mail Box | STA # / Null | This value is used to set the destination, when route DID call during day ring mode. The eleven different destination types can be selected. |
| | 3 | Night Destination | STA # / Hunt # / VMIB # / VMIB # drop SPD<br><br>Int Page<br>Ext Page<br>All Page<br>Net Num<br>Conf Room<br>Station Voice Mail Box | ATD STA # | This value is used to set the destination, when route DID call during night ring mode. The eleven different destination types can be selected. |
| | 4 | Weekend Destination | STA # / Hunt # / VMIB # / VMIB # drop SPD<br><br>Int Page<br>Ext Page<br>All Page<br>Net Num<br>Conf Room<br>Station Voice Mail Box | ATD STA # | This value is used to set the destination, when route DID call during weekend ring mode. The eleven different destination types can be selected. |
| | 5 | Lunch Destination | STA # / Hunt # / VMIB # / VMIB # drop SPD<br><br>Int Page<br>Ext Page<br>All Page<br>Net Num<br>Conf Room<br>Station Voice Mail Box | ATD STA # | This value is used to set the destination, when route DID call during Lunch ring mode. The eleven different destination types can be selected. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 5 | Reroute Destination | STA # / Hunt # / VMIB # / VMIB # drop SPD Net Number Station Voice Mail Box | ATD STA # | This value is used to set the second destination, when routed DID call destination is busy. |
| 232 | | System Speed Zone | 01-10 | | |
| | 1 | Speed Bin Range in Zone | | 2000-6999 (ipLDK-300E) 2000-4999 (ipLDK-300) 2000-3499 (ipLDK-100) 2200 – 2499 (ipLDK-20) | The system speed zone can be grouped the maximum 10 system speed zone. About each system speed zone, the accessibility can be set at PGM232 – FLEX 2. The toll check of each system speed zone can be set at PGM232 – FLEX 4. And the account code to access each system speed zone can be set at PGM232 – FLEX 5. But, the system speed bin section between 2000 and 2199 is defined the toll free zone. The system speed dial within this zone isn't checked by the toll table. |
| | 2 | Station Range | STA No. | 1000-1599 (ipLDK-300E) 100-399 (ipLDK-300) 100-227 (ipLDK-100) 10-37 (ipLDK-20) | The accessibility of the system speed zones can be assigned to each station. |
| | 3 | Toll Checking | ON/OFF | ON | If this value is set to ON, the speed dial of this zone is checked by the toll table. |
| | 4 | Authorization check | ON/OFF | ON | If this value is set, the station user must enter this value to use the speed dial of each system speed zone. |
| 233 | | Weekly Time Table | 1–7 | - | This ADMIN program is used at the ring assignment feature (refer to the **Feature Description and Operation manual**, Section 2.1.1). The Weekly Time Table can manage ring mode changes automatically, and is executed by the system attendant and each intercom tenancy group attendant. Up to 16 Weekly Time Tables exist. The first table is for the system attendant, and others are for the intercom tenancy group attendant. The table consists of 7 days, Monday/Tuesday/Wednesday/Thursday/Friday /Saturday/Sunday. On each day, the time zone of DAY/NIGHT/WEEKEND/Lunch Start/Lunch End mode can be programmed. For example, office work starts at 9:00(AM) and finishes at 5:00(PM) during week day. And the weekend starts at 5:00(PM) from Friday to Sunday. In this case, the Weekly Time Table can be set as the following ADMIN program value. |
| | 1 | Day Start Time | 0000–2359 | 0900 | |
| | 2 | Night Start Time | 0000–2359 | 1800 | |
| | 3 | Weekend Start Time | 0000–2359 | | |
| | 4 | Lunch Start Time | 0000-2359 | | |
| | 5 | Lunch End Time | 0000 -2359 | | |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 234 | | Voice Mail Dial-Table | 1-9 | | This ADMIN program is used at the VM hunt group feature. This value defines the interface of dialing command between ipLDK and the external VM device. |
| | 1 | Prefix Index | 12 Digits | - | |
| | 2 | Suffix Index | 12 Digits | - | |
| 236 | | Mobile Extension Table | | | |
| | 1 | Mobile Extension Enable | ON/OFF | OFF | Used to set Mobile Extension features. |
| | 2 | Mobile Extension CO Group. | 01-24 | | Assign CO group when a call routes to a mobile extension. |
| | 3 | Mobile Extension Tel No | Max 24 | | Assign the telephone number of mobile extension. |
| | 4 | Mobile EXT CLI No | | | This value is used as the CLI of Mobile Extension. |
| | 5 | Mobile Extension Hunt Call | ON/OFF | OFF | If this feature is set to ON and station is a member of Hunt group, then the Hunt call is served to the Mobile extension also. |
| | 6 | Voice Mail Notification to Mobile | ON/OFF | OFF | If this feature is set to ON and if a voice message is left at the station, the system sends SMS notification to its Mobile Extension (Only possible when PSTN SMS is served). |
| | 7 | Mobile Extension Usage | ON/OFF | OFF | If this value is set to ON, it means mobile extension is used.<br>Same as station PGM+34. |
| 204 | | Local Code | Entry No. (01-16), Max 5 digits | NONE | The local call is defined that the telephone number is matched with ADMIN program 204. If telephone numbers matches this table, the SMDR is printed as local call.<br>Max. 16 SMDR local codes are available.<br>SMDR long distance code can be up to 5 digits number. |

## 4.3.25 PSTN SMS ATTRIBUTES

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 290 | | SMSB Attributes | | | Not in ipLDK-20 |
| | 1 | IP Address | | | |
| | 2 | Gateway Address | | | |
| | 3 | Subnet Mask | | | |
| | 4 | Server Address | | | |
| | 5 | Password | | | |
| 291 | | SMS Settings | | | Not in ipLDK-20 |
| | 1 | SMS Center Number | Max 8 digits | | This number is dialed when a Short Message is submitted. |
| | 2 | SMS Center CLI | Max 8 digits | | This number is dialed when a Short Message is submitted. This number should be matched with the caller ID of an incoming SMS call to receive the Short Message. |
| 292 | | SMS CO Attributes | CO Range | | Not available in ipLDK-20. |
| | 1 | SMS Receive Station | Station Range + ON/OFF | | Assign which stations will receive an incoming Short Message. |
| | 2 | View SMS Receive Station | | | Display which stations are assigned to receive an incoming Short Message. |
| | 3 | SMS Outgoing CO | ON/OFF | | If a CO line is set to 'SMS Outgoing CO', we use this CO line when submit Short Message. |
| | 4 | NON-CID SMS | ON/OFF | | This feature is used when CID function is not available for a CO line. If this field is set, incoming call is unconditionally answered and system decides whether it is SMS call or not. |

## 4.3.26 NETWORKING ATTRIBUTE

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 320 | | Networking Basic Attributes | F1-F7 | | |
| | 1 | Networking Enable | ON/OFF | OFF | This ADMIN program value is used to enable the networking feature.<br>To set this ADMIN value to ON, the networking software lock-key must be installed at ipLDK system.<br>A Station user may enter the software lock-key Check Dialing command, [TRANS/PGM] + 78,, then the installed software lock-key is displayed on station LCD. |
| | 2 | Networking Retry Count | 00–99 | 00 | This ADMIN value is used to retry the connection when ipLDK system detects an error during networking connection signaling. This value is only used when the networking feature is executed through the public switching network. This value is not used at the networking feature between direct connected ipLDK systems. |
| | 3 | Networking CNIP Enable | ON/OFF | ON | The name of calling station is sent to the called system between ipLDK systems. CNIP is displayed on called party station LCD according to ADMIN programming. If the CNIP and CLI are received together, CNIP is prior to CLI. |
| | 4 | Networking CONP Enable | ON/OFF | OFF | The name of answered station is sent to the calling system between ipLDK systems. CONP is displayed on the calling party station LCD according to ADMIN programming. |
| | 5 | Networking Signal Method | FAC/UUS | FAC | Select the information element type for networking supplementary service message. FACILITY/USER-TO-USER information element can be used for networking supplementary service message. |
| | 6 | Networking CAS Enable | ON/OFF | OFF | The networking CAS is explained in the **Feature Description and Operation manual,** Section 2.16.16.<br>If the centralized attendants enabled in the master system, CAS should be disabled. |
| | 7 | Networking VPN Enable | ON/OFF | OFF | Reserved |
| | 8 | NET CC Retain Mode | ON/OFF | OFF | This value is used to set the networking supplementary signaling type of the call completion.<br>If this value is set to ON, the signaling of call completion retain mode is executed. |
| 321 | | Supplementary Attributes | F1-F7 | | |
| | 1 | Networking Transfer Mode | REROUT /JOIN | REROUT | At international standard of the networking transfer signaling, two kinds of signaling type exist, Reroute and Rejoin.<br>This value is used to select the signaling type of networking transfer. |
| | 2 | TCP Port | 4 digits | 9000 | The BLF is explained in the **Feature Description and Operation manual**, Section 2.16.19.<br>This ADMIN program is used to set the TCP port for BLF message. |
| | 3 | UDP Port | 4 digits | 9001 | The BLF is explained in the **Feature Description and Operation manual**, Section 2.16.19.<br>This ADMIN program is used to set the UDP port for BLF message |
| | 4 | BLF Manager IP Address | 12 digits | 0.0.0.0 | The BLF is explained in the **Feature Description and Operation manual**, Section 2.16.19.<br>This ADMIN program is used to set the IP Address of BLF manager for BLF service. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 5 | Duration of BLF Status | 01-20 sec | 02 | The BLF is explained in the **Feature Description and Operation manual**, Section 2.16.19. This ADMIN program is used to set the duration of BLF status message. |
| | 6 | Multicast IP Address | 12 digits | 0.0.0.0 | The BLF is explained in the **Feature Description and Operation manual**, Section 2.16.19. This ADMIN program is used to set the IP address of multicast for BLF service. |
| | 7 | Networking Transfer Fault Recall Timer | 1-300 | 10 | |
| | 8 | VOIB Call Reroute CO Group | 00-24 | | Used to set the CO group of gatekeeper. |
| 322 | | Networking CO Line Attributes | CO Line range | | |
| | 1 | Networking CO Line Group | 00–24 | 00 | This ADMIN program is used to select CO Line Group for networking call. |
| | 2 | Reserved | | | |
| | 3 | Use Gatekeeper | ON/OFF | OFF | Determines if the Gatekeeper will be used. |
| | 4 | Networking Co Line Type | NET/PSTN | PSTN | This ADMIN program is used to select the type of system that is connected through the networking CO line. The system type can be separated two types: NET, that is the networking software installed private system; and PSTN, that is the public switching network system. |
| | 5 | VOIB Mode | H.323/SIP | | Determines which protocol is used, H.323 or SIP, at each VOIP CO line. |
| | 6 | DTMF Mode | 2 = INBAND DTMF<br>3 = RFC2833 DTMF<br>4 = OUTBAND DTMF | | This ADMIN program determines DTMF Mode at each VOIP CO line. |
| 324 | | Networking Routing Table | 00-71 | | |
| | 1 | System Usage | NET/PSTN | NET | Used to set the networking connection type of the selected table entries. If PSTN is directly connected, this value must be set to PSTN. If the networking software installed system is directly connected, this value must be set to NET (refer to Feature Description and Operation manual, Section 2.16.1 for an illustrated example of Networking Admin). |
| | 2 | Networking Numbering Code | 16 digits | - | Used to set the networking number code of the selected table entries. '*' means any digits can be inserted between 0-9. Digits followed by '#' is an internal station number (refer to Feature Description and Operation manual, Section 2.16.1 for an illustrated example of Networking Admin). |
| | 3 | Networking Number CO Line Group | 00-24 | - | This ADMIN program is used to select CO line group for networking call. If networking call number corresponding Networking Numbering Code is entered, the networking call route to the destination through this CO Line Group (refer to Feature Description and Operation manual, Section 2.16.1 for an illustrated example of Networking Admin). |
| | 4 | CPN or IP Information | 16 digits at QSIG,<br>4 IP Address at VOIP | / 0.0.0.0 | CPN information for ISDN, IP address for VOIP (CPN info 1-CPN info 4). Refer to Feature Description and Operation manual, Section 2.16.1 for an illustrated example of Networking Admin. |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 5 | Alternate Dial Bin | 2000-2499 | - | Alternative Dial Number (System SPD Bin) when the networking path has a fatal problem (refer to Feature Description and Operation manual, Section 2.16.1 for an illustrated example of Networking Admin). |
| | 6 | Destination MPB IP | IP Address | - | IP Address of destination system to support DECT mobility service (refer to Refer to Feature Description and Operation manual, Section 2.16.17 for DECT mobility service is explanation. |
| | 7 | Digit Repeat | YES/NO | NO | If this PSTN number is not connected with PSTN line directly but connected by another networking system, set the Digit Repeat to YES (refer to Feature Description and Operation manual, Section 2.16.1 for an illustrated example of Networking Admin). |
| | 8 | CO ATD Code CLI | YES/NO | NO | During transit-out, this admin value determines which CLI should send to PX. |
| | 9 | | | | |
| | 10 | AUTHO Code COS Use | YES/NO | NO | When the value is set to YES, COS of Transit-out call will be determined by password of Autho-Code Table COS. |
| | 11 | SMDR DIAL HIDDEN | YES/NO | NO | When the value is set to YES Transit-Out Code and Dialed Number in SDMR data will not be printed at slave system. |

## 4.3.27 VOIB NET ATTRIBUTES

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 340 | | VOIB IP SETTING | | | |
| | 1 | IP Address (SKIP = #) | 12 digits | 0.0.0.0 | Used to set the IP address of VOIP board. |
| | 2 | Gateway Address (SKIP = #) | 12 digits | 0.0.0.0 | Used to set the gateway address of VOIP board. |
| | 3 | Subnet Mask( SKIP = #) | 12 digits | 250.250.255.0 | Used to set the subnet mask of VOIP board. |
| | 4 | DNS Address (SKIP = #) | 12 digits | 0.0.0.0 | Used to set the DNS address of VOIP board. |
| | 5 | Trace Password | 10 digits | . . . . | Used to set the password which needs to contact to VOIP board for trace. |
| | 6 | Default Codec | 0–4 | 0 (G.723.1) | Used to set the default codec of VOIP board. |
| | 7 | Default Gain | 1-62 | 31 | Used to set the default codec of VOIP board. |
| | 8 | NO Delay (TOS) | ON/OFF | OFF | Used for selecting if the response of VOIP board will be delayed. |
| | 9 | Throughput (TOS) | HIGH/NORMAL | NORMAL | Used for selecting if the throughput of VOIP board is high or normal. |
| | 10 | Reliability (TOS) | HIGH/NORMAL | NORMAL | Used for selecting if the reliability of VOIP board is high or normal. |
| | 11 | Firewall IP Address | IP Address | 0.0.0.0 | Used for selecting the NAT Firewall IP address of VOIP board. |
| | 12 | VOIB Mode | 0-2 | 0 | Used for selecting the trunk signaling protocol of VOIP board, and if the mode of VOIP board is H.323 , SIP or DUAL.<br>If it is set to DUAL, selected VOIP board manage both H.323 and SIP automatically.<br>0 = H.323/ 1 = SIP/ 2 = Dual |
| | 13 | Silence Detection | ON/OFF | 0 (OFF) | Used for selecting if the Silence Detection of VOIP board is in use. |
| | 14 | Echo Canceller | ON/OFF | 1 (ON) | Used for selecting if the Echo Canceller of VOIP board is in use. |
| | 15 | DTMF Mode | 2-4 | 2 | Used for setting the DTMF mode of VOIP board.<br>2 = Inband DTMF/ 3 = RFC 2833/ 4 = Outband DTMF |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 16 | Jitter Buffer | 050-300 (ms) | 150 | Used for setting the Jitter buffer of VOIP board. |
| | 17 | Voice Monitor | ON/OFF | OFF | Used for setting the Voice Monitor of VOIP board. [reserved] |
| | 18 | H.323 Mode | Fast (1) / Normal (0) | Fast (1) | This ADMIN program selects H.323 Mode. |
| | 19 | Early H.245 | ON/OFF | ON (1) | Determines if Early H.245 Mode is used. |
| | 20 | H.245 Tunneling | ON/OFF | OFF (0) | Determines if H.245 Tunneling is used. |
| | 21 | TOS Preference | 0-7 | 0 | This ADMIN program sets TOS Precedence. |
| | 22 | FAX Mode | ON/OFF | OFF (0) | This ADMIN program sets FAX Mode. |
| 341 | | Gatekeeper SETTING | | | |
| | 1 | Gatekeeper Usage | ON/OFF | OFF | Determines if Gatekeeper is used. |
| | 2 | Gatekeeper Call Mode | Direct /Reroute | Reroute | Select method to send the Q.931 message from VOIP board to Gatekeeper. |
| | 3 | Gatekeeper Open H245 | ON/OFF | OFF | Determines if H245 port is opened. |
| | 4 | Gatekeeper H245 Tunneling | ON/OFF | OFF | Reserved |
| | 5 | Gatekeeper Pre-granted ARQ | ON/OFF | OFF | Reserved |
| | 6 | Gatekeeper Out-Of-Band Flash | ON/OFF | OFF | Reserved |
| | 7 | Gatekeeper Time To Live | 0-250(sec) | 30 | Set interval of RRQ message. |
| | 8 | Gatekeeper Address(SKIP:#) | 12 digits | 0.0.0.0 | Set GK IP address to register. |
| | 9 | Gatekeeper Find Address (SKIP:#) | 12 digits | 224.0.1.41 | Reserved |
| | 10 | Gatekeeper Find Port | 0-9999 | 1718 | Reserved |
| | 11 | Gatekeeper RAS Signal Port | 0-9999 | 1719 | Set GK RAS signal port. |
| | 12 | Gatekeeper Signal Port | 0-9999 | 1720 | Set GK call signal port. |
| | 13 | VOIB Gatekeeper ID | 23 Characters | | Set unique GK ID. |
| | 14 | VOIBH323 ID | 23 Characters | | Set unique VOIB ID. |
| | 15 | VOIB E164 Address | 23 Digits | | Set station number under GK. |
| | 16 | VOIB Terminal Alias | 20 Digits | | Reserved |

## 4.3.28 SIP Setting

*(PC Admin Only)*

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 500 | | SIP SETTING | | | |
| | 1 | SIP Proxy Server Address | | 0.0.0.0 | Set SIP Proxy address. |
| | 2 | SIP Proxy Server Port | | 5060 | Set SIP Proxy signaling port. |
| | 3 | Proxy Registration Timer | | 1800 | Set Proxy Registration Timer value. |
| | 4 | Use Outbound Proxy | 0-1 | 1 | Determine outbound proxy usage |
| | 5 | Primary DNS Address | | | Set primary DNS address. |
| | 6 | Secondary DNS Address | | | Set secondary DNS address which is used when primary DNS is down. |
| | 7 | Called Party Domain | | | Set called party domain name. VOIB makes "TO" header of "INVITE" message using dialed number and this field (ex., dialed_no@calledparty.domain). |
| | 8 | Connection Mode | 0-1 | 0 | Set SIP transport protocol. 0 = UDP/ 1 = TCP |
| | 9 | 100rel Support | 0-1 | 0 | Usage of SIP "100rel" extension (reliable transfer of SIP protocol). |

| | | | | | |
|---|---|---|---|---|---|
| | 10 | Use Rport Method | 0-1 | 0 | Usage of SIP "rport" extension (to support NAT). |
| | 11 | Use Single Codec Only | 0=OFF<br>1=ON | OFF (0) | If this value is ON, VOIB suggests default codec only through a SDP codec negotiation.<br>If this value is OFF, VOIB suggests all available codecs through a SDP codec negotiation. |
| | 12 | Remote Part ID | ON/OFF | | This Admin is used to support 'Remote Part ID' for CID. |
| | 13 | 181 Message | ON/OFF | | If this feature is set to ON, 181 message is supported (ex., call is being forwarded to a different set of destinations). |
| | 14 | IP Centrex | ON/OFF | | If this feature is set to ON, IP Centrex service is supported. |
| 501 | | SIP User ID Table | | | |
| | 1 | User ID | 64 ASCII character | | Set SIP User ID which is used "From" Header (ex., caller@caller.domain) |
| | 2 | Authentication User Name | 64 ASCII character | | Used to set authentication user name if authentication is used. |
| | 3 | Authentication Password | 64 ASCII character | | Used to set authentication user password if authentication is used. |
| | 4 | Contact Number | Maximum 8 digit | | VOIB use "Contact" header using this field and VOIB IP address. Usually set station number or DID number to route this SIP UID. |
| | 5 | User ID Register | 0-1 | 0 | Determines registration of this SIP UID |
| | 6 | User ID Usage | ON/OFF | | Determines if User ID is used. |
| | 7 | Associate Station | Station Number | | Used to set the Associate Station for Broadsoft server. |

## 4.3.29 RSG/IP Phone Setting

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 380 | | VOIB Slot For RSG/IP | | | |
| | 1 | Slot Assign | - | - | |
| | 2 | Channel Assign | 0 – 8 (ipLDK-20)<br>0 – 24 (ipLDK-100/300/300E) | 0 | |
| 381 | | RSG/IP No Assign | | | |
| | 1 | RSG Number | 0-8 (ipLDK-20)<br>0-96 (ipLDK-100/300/300E) | 08 (ipLDK-100/300/300E)<br>0 ( ipLDK-20) | |
| | 2 | IP Phone Number | 00-16 (ipLDK-20)<br>00-96 (ipLDK-100/300/300E) | 00 | |
| 382 | | RSG/IP Attribute | | | |
| | 1 | Transfer Mode | IP/MAC | IP | |
| | 2 | Casting Mode | Unicast/Multicast | Unicast | |
| | 3 | Tone Source | ipLDK/Remote (RSG/IP Phone) | Remote | |
| | 4 | Peer-to-Peer | ON/OFF | ON | |
| | 5 | Codec Type | G.711_ALAW (0)/<br>G.711_ULAW (1)/<br>G.723.1 (2)<br>G.729. (3)<br>G.729A (4) | G.711_ALAW (0) | |
| | 6 | First Access RSG CO | ON/OFF | ON | |
| | 7 | Ring Without CO Ring Assign | ON/OFF | ON | |
| 383 | | RSG Attribute 1 | | | |
| | 1 | Set MAC Address | | 00-00-00-00-00-00 | |
| | 2 | IP Address Display | | 0.0.0.0 | |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 3 | PORT View | | | |
| | 4 | Port Number | | | IP Port number used when system communicates with RSG. |
| | 5 | NAT IP Address Display | | 0.0.0.0 | |
| | 6 | NAT Port Number | | 0 | NAT Port number used when system communicates with the RSG. |
| | 7 | STUN Enabled | | None | |
| 384 | | RSG Attribute 2 | | | |
| | 1 | Internal MOH RTP Port | | 8186 | |
| | 2 | External MOH RTP Port | | 8188 | |
| | 3 | MOH Type | Music/Hold Tone | Hold Tone | |
| | 4 | Music Source | EXT1/INT | INT | |
| | 5 | External Contact 1 | LBC/Door Open | N/A | |
| | 6 | External Contact 2 | LBC/Door Open | N/A | |
| | 7 | Alarm Enable | ON/OFF | OFF | |
| | 8 | Alarm Contact | Close/Open | Close | |
| | 9 | Alarm Mode | Alarm/Door Bell | Alarm | |
| | 10 | Alarm Signal | Repeat/Once | Repeat | |
| | 11 | CTI Port | 0-2 | Not Used | CTI port to be assigned in RSG<br>0 = Not Used<br>1 = DKTU in RSG<br>2 = SLT in RSG |
| | 12 | RSG Nation Code | | System Nation | |
| | 13 | IPSEC | ON/OFF | OFF | If this value is set to ON, IP security is supported. |
| 385 | | RSG Alarm Attribute | | | |
| | 1 | RSG 01-24 | None | | |
| | 2 | RSG 25-48 | None | | |
| | 3 | RSG 49-72 | None | | |
| | 4 | RSG 73-96 | None | | |
| 386 | | IP Phone Attribute | | | |
| | 1 | Set MAC Address | | 00-00-00-00-00-00 | |
| | 2 | IP Address Display | | 0.0.0.0 | |
| | 3 | PORT View | | N/A | |
| | 4 | PORT Number | | N/A | |
| | 5 | NAT IP Address Display | | 0.0.0.0 | |
| | 6 | NAT Port Number | | 0 | |
| | 7 | STUN Enabled | | None | |
| | 8 | CTI IP Address (SKIP = #) | | 0.0.0.0 | |
| | 9 | IPSEC | ON/OFF | OFF | |
| | 10 | Outside NAT Firewall | ON/OFF | OFF | |
| | 11 | User ID | Max 12 characters | | Phontage can be registered to the system by entering User ID/Password. |
| | 12 | User Password | Max 12 characters | | Phontage can be registered to the system by entering this User ID / Password. |
| 390 | | RSG_DKT RX Gain | | | |
| | 1 | RSG_DKT RX from DKTU | 00 – 63 | | |
| | 2 | RSG_DKT RX from SLT | 00 – 63 | | |
| | 3 | RSG_DKT RX from CTR_SLT | 00 – 63 | | |
| | 4 | RSG_DKT RX from WKT | 00 – 63 | | |
| | 5 | RSG_DKT RX from ACO | 00 – 63 | | |
| | 6 | RSG_DKT RX from CTR_ACO | 00 – 63 | | |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 7 | RSG_DKT RX from DCO | 00 – 63 | | |
| | 8 | RSG_DKT RX from VMIB | 00 – 63 | | |
| | 9 | RSG_DKT RX from DTMF | 00 – 63 | | |
| | 10 | RSG_DKT RX from TONE | 00 – 63 | | |
| | 11 | RSG_DKT RX from MUSIC 1 | 00 – 63 | | |
| | 12 | RSG_DKT RX from MUSIC 2 | 00 – 63 | | |
| | 13 | RSG_DKT RX from RSG_DKT | 00 – 63 | | |
| | 14 | RSG_DKT RX from RSG_SLT | 00 – 63 | | |
| | 15 | RSG_DKT RX from RSG_LCO | 00 – 63 | | |
| | 16 | RSG_DKT RX from IP Phone | 00 – 63 | | |
| 391 | | RSG_DKT TX Gain | | | |
| | 1 | RSG_DKT RX to DKTU | 00 – 63 | | |
| | 2 | RSG_DKT RX to SLT | 00 – 63 | | |
| | 3 | RSG_DKT RX to CTR_SLT | 00 – 63 | | |
| | 4 | RSG_DKT RX to WKT | 00 – 63 | | |
| | 5 | RSG_DKT RX to ACO | 00 – 63 | | |
| | 6 | RSG_DKT RX to CTR_ACO | 00 – 63 | | |
| | 7 | RSG_DKT RX to DCO | 00 – 63 | | |
| | 8 | RSG_DKT RX to DVU | 00 – 63 | | |
| 392 | | RSG_SLT RX Gain | | | |
| | 1 | RSG_SLT RX from DKTU | 00 – 63 | | |
| | 2 | RSG_SLT RX from SLT | 00 – 63 | | |
| | 3 | RSG_SLT RX from CTR_SLT | 00 – 63 | | |
| | 4 | RSG_SLT RX from WKT | 00 – 63 | | |
| | 5 | RSG_SLT RX from ACO | 00 – 63 | | |
| | 6 | RSG_SLT RX from CTR_ACO | 00 – 63 | | |
| | 7 | RSG_SLT RX from DCO | 00 – 63 | | |
| | 8 | RSG_SLT RX from VMIB | 00 – 63 | | |
| | 9 | RSG_SLT RX from DTMF | 00 – 63 | | |
| | 10 | RSG_SLT RX from TONE | 00 – 63 | | |
| | 11 | RSG_SLT RX from MUSIC 1 | 00 – 63 | | |
| | 12 | RSG_SLT RX from MUSIC 2 | 00 – 63 | | |
| | 13 | RSG_SLT RX from RSG_DKT | 00 – 63 | | |
| | 14 | RSG_SLT RX from RSG_SLT | 00 – 63 | | |
| | 15 | RSG_SLT RX from RSG_LCO | 00 – 63 | | |
| | 16 | RSG_SLT RX from IP Phone | 00 – 63 | | |
| 393 | | RSG_SLT TX Gain | | | |
| | 1 | RSG_SLT TX to DKTU | 00 – 63 | | |
| | 2 | RSG_SLT TX to SLT | 00 – 63 | | |
| | 3 | RSG_SLT TX to CTR_SLT | 00 – 63 | | |
| | 4 | RSG_SLT TX to WKT | 00 – 63 | | |
| | 5 | RSG_SLT TX to ACO | 00 – 63 | | |
| | 6 | RSG_SLT TX to CTR_ACO | 00 – 63 | | |
| | 7 | RSG_SLT TX to DCO | 00 – 63 | | |
| | 8 | RSG_SLT TX to VMIB | 00 – 63 | | |
| 394 | | RSG_LCO RX Gain | | | |
| | 1 | RSG_LCO RX from DKTU | 00 – 63 | | |
| | 2 | RSG_LCO RX from SLT | 00 – 63 | | |
| | 3 | RSG_LCO RX from CTR_SLT | 00 – 63 | | |
| | 4 | RSG_LCO RX from WKT | 00 – 63 | | |
| | 5 | RSG_LCO RX from ACO | 00 – 63 | | |
| | 6 | RSG_LCO RX from CTR_ACO | 00 – 63 | | |
| | 7 | RSG_LCO RX from DCO | 00 – 63 | | |
| | 8 | RSG_LCO RX from VMIB | 00 – 63 | | |
| | 9 | RSG_LCO RX from DTMF | 00 – 63 | | |
| | 10 | RSG_LCO RX from TONE | 00 – 63 | | |
| | 11 | RSG_LCO RX from MUSIC 1 | 00 – 63 | | |
| | 12 | RSG_LCO RX from MUSIC 2 | 00 – 63 | | |
| | 13 | RSG_LCO RX from RSG_DKT | 00 – 63 | | |
| | 14 | RSG_LCO RX from RSG_SLT | 00 – 63 | | |
| | 15 | RSG_LCO RX from RSG_LCO | 00 – 63 | | |
| | 16 | RSG_LCO RX from IP Phone | 00 – 63 | | |
| 395 | | RSG_LCO TX Gain | | | |
| | 1 | RSG_LCO TX to DKTU | 00 – 63 | | |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 2 | RSG_LCO TX to SLT | 00 – 63 | | |
| | 3 | RSG_LCO TX to CTR_SLT | 00 – 63 | | |
| | 4 | RSG_LCO TX to WKT | 00 – 63 | | |
| | 5 | RSG_LCO TX to ACO | 00 – 63 | | |
| | 6 | RSG_LCO TX to CTR_ACO | 00 – 63 | | |
| | 7 | RSG_LCO TX to DCO | 00 – 63 | | |
| | 8 | RSG_LCO TX to VMIB | 00 – 63 | | |
| 396 | | IP Phone RX Gain | | | |
| | 1 | IP Phone RX from DKTU | 00 – 63 | | |
| | 2 | IP Phone RX from SLT | 00 – 63 | | |
| | 3 | RESERVED | | | |
| | 4 | RESERVED | | | |
| | 5 | IP Phone RX from ACO | 00 – 63 | | |
| | 6 | RESERVED | | | |
| | 7 | IP Phone RX from DCO | 00 – 63 | | |
| | 8 | IP Phone RX from VMIB | 00 – 63 | | |
| | 9 | IP Phone RX from DTMF | 00 – 63 | | |
| | 10 | IP Phone RX from TONE | 00 – 63 | | |
| | 11 | IP Phone RX from MUSIC 1 | 00 – 63 | | |
| | 12 | IP Phone RX from MUSIC 2 | 00 – 63 | | |
| | 13 | RESERVED | | | |
| | 14 | RESERVED | | | |
| | 15 | RESERVED | | | |
| | 16 | IP Phone RX from IP Phone | 00 – 63 | | |
| 397 | | IP Phone TX Gain | | | |
| | 1 | IP Phone TX to DKTU | 00 – 63 | | |
| | 2 | IP Phone TX to SLT | 00 – 63 | | |
| | 3 | RESERVED | | | |
| | 4 | RESERVED | | | |
| | 5 | IP Phone TX to ACO | 00 – 63 | | |
| | 6 | RESERVED | | | |
| | 7 | IP Phone TX to DCO | 00 – 63 | | |
| | 8 | IP Phone TX to VMIB | 00 – 63 | | |

## 4.3.30 NATION SPECIFIC

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 400 | | DTIB RX Gain | | Korean Version | |
| | 1 | DTIB/DKT | 00 – 63 | 26 | |
| | 2 | DTIB/SLT | 00 – 63 | 33 | |
| | 3 | DTIB/CTR SL | 00 – 63 | 22 | Not in ipLDK-20 |
| | 4 | DTIB/WTU | 00 – 63 | 26 | |
| | 5 | DTIB/ACO | 00 – 63 | 33 | |
| | 6 | | | | |
| | 7 | DTIB/DCO | 00 – 63 | 33 | |
| | 8 | DTIB/VMIB | 00 – 63 | 29 | |
| | 9 | DTIB/DTMF | 00 – 63 | 8 | |
| | 10 | DTIB/TONE | 00 – 63 | 32 | |
| | 11 | DTIB/MUSIC1 | 00 – 63 | 29 | |
| | 12 | DTIB/MUSIC2 | 00 – 63 | 29 | |
| | 13 | DTIB/MUSIC3 | 00 – 63 | 29 | |
| 401 | | SLIB RX Gain | | | |
| | 1 | SLIB/DKT | 00 – 63 | 12 | |
| | 2 | SLIB/SLT | 00 – 63 | 23 | |
| | 3 | SLIB/CTR SL | 00 – 63 | 12 | ipLDK-100=Default 27<br>Not in ipLDK-20 |
| | 4 | SLIB/WTU | 00 – 63 | 12 | ipLDK-100=Default 16 |
| | 5 | SLIB/ACO | 00 – 63 | 21 | |
| | 6 | SLIB CTR CO | 00 – 63 | 20 | Not in ipLDK-20 |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 7 | SLIB/DCO | 00 – 63 | 24 | |
| | 8 | SLIB/VMIB | 00 – 63 | 20 | |
| | 9 | SLIB/DTMF | 00 – 63 | 8 | |
| | 10 | SLIB/TONE | 00 – 63 | 18 | |
| | 11 | SLIB/MUSIC1 | 00 – 63 | 20 | |
| | 12 | SLIB/MUSIC2 | 00 – 63 | 20 | |
| | 13 | SLIB/MUSIC3 | 00 – 63 | 20 | |
| 402 | | CTR SLIB RX Gain | | | |
| | 1 | CTRSL2/DKT | 00 – 63 | 32 | |
| | 2 | CTRSL2/SLT | 00 – 63 | 43 | |
| | 3 | CTRSL2/ CTR SL | 00 – 63 | 32 | |
| | 4 | CTRSL2/WTU | 00 – 63 | 32 | |
| | 5 | CTRSL2/ACO | 00 – 63 | 41 | |
| | 6 | CTRSL2/ATR CO | 00 – 63 | 32 | |
| | 7 | CTRSL2/DCO | 00 – 63 | 44 | Not in ipLDK-20 |
| | 8 | CTRSL2/VMIB | 00 – 63 | 40 | |
| | 9 | CTRSL2/DTMF | 00 – 63 | 28 | |
| | 10 | CTRSL2/TONE | 00 – 63 | 38 | |
| | 11 | CTRSL2/MUSIC1 | 00 – 63 | 40 | |
| | 12 | CTRSL2/MUSIC2 | 00 – 63 | 40 | |
| | 13 | CTRSL2/MUSIC3 | 00 – 63 | 40 | |
| 403 | | WTIB RX Gain | | | |
| | 1 | WTIB/DKT | 00 – 63 | 26 | |
| | 2 | WTIB/SLT | 00 – 63 | 33 | |
| | 3 | WTIB/CTR SL | 00 – 63 | 22 | |
| | 4 | WTIB/WTU | 00 – 63 | 26 | |
| | 5 | WTIB/ACO | 00 – 63 | 38 | |
| | 6 | WTIB/CTR CO | 00 – 63 | 29 | |
| | 7 | WTIB/DCO | 00 – 63 | 33 | |
| | 8 | WTIB/VMIB | 00 – 63 | 29 | |
| | 9 | WTIB/DTMF | 00 – 63 | 8 | |
| | 10 | WTIB/TONE | 00 – 63 | 37 | |
| | 11 | WTIB/MUSIC1 | 00 – 63 | 29 | |
| | 12 | WTIB/MUSIC2 | 00 – 63 | 29 | |
| | 13 | WTIB/MUSIC3 | 00 – 63 | 29 | |
| 404 | | ACOB RX Gain | | | |
| | 1 | ACOB/DKT | 00 – 63 | 26 | |
| | 2 | ACOB/SLT | 00 – 63 | 37 | |
| | 3 | | | | |
| | 4 | | | | |
| | 5 | ACOB/ACO | 00 – 63 | 36 | |
| | 6 | | | | |
| | 7 | ACOB/DCO | 00 – 63 | 33 | |
| | 8 | ACOB/VMIB | 00 – 63 | 32 | |
| | 9 | ACOB/DTMF | 00 – 63 | 32 | |
| | 10 | ACOB/TONE | 00 – 63 | 32 | |
| | 11 | ACOB/MUSIC1 | 00 – 63 | 32 | |
| | 12 | ACOB/MUSIC2 | 00 – 63 | 32 | |
| | 13 | | | | |
| | 14 | ACOB/MODEM | 00 – 63 | 37 | |
| 405 | | CTR ACOB RX Gain | | | Not in ipLDK-20 |
| | 1 | CTRCO8/DKT | 00 – 63 | 28 | |
| | 2 | CTRCO8/SLT | 00 – 63 | 43 | |
| | 3 | CTRCO8/CTR SL | 00 – 63 | 32 | |
| | 4 | CTRCO8/WTU | 00 – 63 | 31 | |
| | 5 | CTRCO8/ACO | 00 – 63 | 41 | |
| | 6 | CTRCO8/CTR CO | 00 – 63 | 32 | |
| | 7 | CTRCO8/DCO | 00 – 63 | 38 | |
| | 8 | CTRCO8/VMIB | 00 – 63 | 37 | |
| | 9 | CTRCO8/DTMF | 00 – 63 | 37 | |
| | 10 | CTRCO8/TONE | 00 – 63 | 37 | |
| | 11 | CTRCO8/MUSIC1 | 00 – 63 | 37 | |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| | 12 | CTRCO8/MUSIC2 | 00 – 63 | 37 | |
| | 13 | CTRCO8/MUSIC3 | 00 – 63 | 37 | |
| | 14 | CTRCO8/MODEM | 00 – 63 | 44 | |
| 406 | | DCOB RX Gain | | | |
| | 1 | DCOB/DKT | 00 – 63 | 26 | |
| | 2 | DCOB/SLT | 00 – 63 | 37 | |
| | 3 | | | | |
| | 4 | | | | |
| | 5 | DCOB/ACO | 00 – 63 | 24 | |
| | 6 | | | | |
| | 7 | DCOB/DCO | 00 – 63 | 32 | |
| | 8 | DCOB/VMIB | 00 – 63 | 32 | |
| | 9 | DCOB/DTMF | 00 – 63 | 32 | |
| | 10 | DCOB/TONE | 00 – 63 | 32 | |
| | 11 | DCOB/MUSIC1 | 00 – 63 | 32 | |
| | 12 | DCOB/MUSIC2 | 00 – 63 | 32 | |
| | 13 | | | | |
| | 14 | DCOB/MODEM | 00 – 63 | 37 | |
| 407 | | VMIB RX Gain | | | |
| | 1 | VMIB/DKT | 00 – 63 | 21 | |
| | 2 | VMIB/SLT | 00 – 63 | 32 | |
| | 3 | | | | |
| | 4 | | | | |
| | 5 | VMIB/ACO | 00 – 63 | 32 | |
| | 6 | | | | |
| | 7 | VMIB/DCO | 00 – 63 | 32 | |
| | 8 | VMIB/MUSIC1 | 00 – 63 | 32 | |
| | 9 | VMIB/MUSIC2 | 00 – 63 | 32 | |
| 408 | | DTMF RC Gain | | | |
| | 1 | DTMF/SLT | 00 – 63 | 28 | |
| | 2 | | | | |
| | 3 | DTMF/ACO | 00 – 63 | 24 | |
| | 4 | | | | |
| | 5 | DTMF/DCO | 00 – 63 | 24 | |
| 409 | | EXT PAGE Gain | | | |
| | 1 | EXT PAGE/DKT | 00 – 63 | 26 | |
| | 2 | EXT PAGE/SLT | 00 – 63 | 37 | |
| | 3 | | | | |
| | 4 | | | | |
| | 5 | EXT PAGE/ACO | 00 – 63 | 37 | |
| | 6 | | | | |
| | 7 | EXT PAGE/DCO | 00 – 63 | 37 | |
| | 8 | EXT PAGE/VMIB | 00 – 63 | 37 | |
| | 9 | EXT PAGE/MUSIC1 | 00 – 63 | 37 | |
| | 10 | EXT PAGE/MUSIC2 | 00 – 63 | 37 | |
| | 11 | | | | |
| 410 | | CPT Gain | | | |
| | 1 | CPT/ACO | 00 – 63 | 24 | |
| | 2 | | | | |
| | 3 | CPT/DCO | 00 – 63 | 24 | |
| 411 | | MODEM Gain | | | |
| | 1 | MODEM/ACO | 00 – 63 | 24 | |
| | 2 | | | | |
| | 3 | MODEM/DCO | 00 – 63 | 24 | |
| 412 | | Short SLIB Gain | | | |
| | 1 | Shot ACO | 00 – 63 | 31 | *SAF Only* |
| | 2 | Long ACO | 00 – 63 | 31 | |
| 413 | | Long SLIB Gain | | | |
| | 1 | Shot ACO | 00 – 63 | 37 | *SAF Only* |
| | 2 | Long ACO | 00 – 63 | 37 | |

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 414 | | Far SLIB Gain | | | |
| | 1 | Shot ACO | 00 – 63 | 45 | *SAF Only* |
| | 2 | Long ACO | 00 – 63 | 45 | |
| 415 | | Short ACO Gain | | | |
| | 1 | Short SLIB | 00 – 63 | 35 | *SAF Only* |
| | 2 | Long SLIB | 00 – 63 | 41 | |
| | 3 | Far SLIB | 00 – 63 | 47 | |
| 416 | | Long ACO Gain | | | |
| | 1 | Short SLIB | 00 – 63 | 39 | *SAF Only* |
| | 2 | Long SLIB | 00 – 63 | 45 | |
| | 3 | Far SLIB | 00 – 63 | 51 | |
| 417 | | SMSB RX Gain | | | |
| | 1 | From ACO | 00 – 63 | 24 | |
| | 2 | From CTR ACO | 00 – 63 | 20 | |
| | 3 | From CTR SLT | 00 – 63 | 17 | |
| | 4 | From DCO | 00 – 63 | 33 | |
| 418 | | SMSB TX Gain | | | |
| | 1 | TO ACO | 00 – 63 | 32 | |
| | 2 | TO CTR ACO | 00 – 63 | 32 | |
| | 3 | TO CTR SLT | 00 – 63 | 32 | |
| | 4 | To DCO | 00 – 63 | 32 | |
| 420 | | System Tone Frequency | | | |
| | 1 | Dial Tone | 4digits | 0425, 0000 | Nation specific |
| | 2 | Ring Back Tone | 4digits | 0425, 0000 | Nation specific |
| | 3 | Busy Tone | 4digits | 0425, 0000 | Nation specific |
| | 4 | Error Tone | 4digits | 0620, 000 | Nation specific |
| | 5 | Dummy Dial Tone | 4digits | 0350, 440 | Nation specific |
| 421 | | Differential Ring Frequency | | | |
| | 1 | Ring 1 | 4digits | 1000, 1020 | Nation specific |
| | 2 | Ring 2 | 4digits | 0890, 0910 | Nation specific |
| | 3 | Ring 3 | 4digits | 1260, 1280 | Nation specific |
| | 4 | Ring 4 | 4digits | 0800, 0820 | Nation specific |
| 422 | | Distinct Ring Frequency | | | |
| | 1 | Ring 1 | 4digits | 0480, 0000 | Nation specific |
| | 2 | Ring 2 | 4digits | 0400, 0000 | Nation specific |
| | 3 | Ring 3 | 4digits | 0620, 0000 | Nation specific |
| | 4 | Ring 4 | 4digits | 0770, 0000 | Nation specific |
| 423 | | ACNR Tone Cadence | | | |
| | 1 | Ring-Back Tone | 000-255 | ON = 050<br>OFF = 100 | 20 msec base |
| | 2 | Busy Tone | 000-255 | ON = 025<br>OFF = 025 | 20 msec base |
| | 3 | Error Tone | 000-255 | ON = 012<br>OFF = 012 | 20 msec base |
| | 4 | S –Dial Tone | 000-255 | ON = 070<br>OFF = 000 | 20 msec base |
| 424 | | DTIB Rx ACO Gain | | | SAF only |
| | 1 | Short ACO | 00 – 63 | 37 | |
| | 2 | Long ACO | 00 – 63 | 42 | |

## 4.3.31 INITIALIZATION

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 450 | | Initialization | | | |
| | 1 | Flexible Numbering Plan Initialization | | | PGM105, PGM106, PGM107 |
| | 2 | Station Database Initialization | | | PGM110, PGM111, PGM112, PGM113, PGM114, PGM 116, PGM117, PGM118, PGM119, PGM121,PGM122, PGM123, PGM124, PGM179 |
| | 3 | CO Line Database Initialization | | | PGM140, PGM141, PGM142, PGM143, PGM144 |
| | 4 | System Feature Database Initialization | | | PGM160 – PGM 177, PGM108 |
| | 5 | Station Group Database Initialization | | | PGM190, PGM191 |
| | 6 | ISDN Tables Database Initialization | | | PGM201, PGM202, PGM230, PGM231 |
| | 7 | Reserved | | | None (Reserved) |
| | 8 | System Timer Database Initialization | | | PGM180 – PGM182 |
| | 9 | Toll Table Database Initialization | | | PGM224, PGM225 |
| | 10 | LCR Database Initialization | | | PGM220 – PGM222 |
| | 11 | Tables Initialization | | | PGM227 – PGM229, PGM232 – PGM235 |
| | 12 | Flexible Button Program Initialization | | | PGM115 |
| | 13 | Networking Database Initialization | | | PGM320, PGM321,PGM322,PGM323, PGM324 |
| | 14 | All Database Initialization | | | Initialize All DB of PGM450 |
| | 15 | System Reset By Software | | | |
| | 16 | DID Reroute Table | | | Reroute Destination of PGM231 |
| | 17 | Board DATA | | | PGM340, 341, 155 |
| 452 | 1 | Init Version 2.2 | Initialize DB added from V2.2 to current version. (Not in ipLDK-20) | | |
| | 2 | Init Station Name | (Not in ipLDK-20) | | |
| | 3 | Init Version 2.3 | Initialize DB added from V2.3 to current version. (Not in ipLDK-20) | | |
| | 4 | Init Version 2.5 | Initialize DB added from V2.5 to current version. (Not in ipLDK-20) | | |
| | 5 | Init Version 3.0 | Initialize DB added from V3.0 to current version. (Not in ipLDK-20) | | |
| | 6 | Init Version 3.2 | Initialize DB added from V3.2 to current version. (Not in ipLDK-20) | | |
| | 7 | Init Version 3.3 | Initialize DB added from V3.3 to current version. (Not in ipLDK-20) | | |
| | 8 | Init Version 3.5 | Initialize DB added from V3.5 to current version. (Not in ipLDK-20) | | |
| | 9 | Init Version 3.6 | Initialize DB added from V3.6 to current version. | | |
| | 10 | Init Version 3.7 | Initialize DB added from V3.7 to current version. | | |
| | 11 | Init Version 3.8<br>Init Version 3.8A (ipLDK-20) | Initialize DB added from V3.7 to current version. | | |
| | 12 | Init Version 3.8B (ipLDK-20) | Initialize DB added from V3.8A to current version. (ipLDK-20 Only) | | |

## 4.3.32 PRINT PROTECTED DATABASE

| PGM | FLEX | ITEM | RANGE | DEFAULT | REMARK |
|---|---|---|---|---|---|
| 451 | | Print Protected Data | | | |
| | 1 | Flexible Numbering Plan Print | | | |
| | 2 | Station Database Print | STN_R | | |
| | 3 | CO Line Database Print | CO_R | | |
| | 4 | System Feature Database Print | | | |
| | 5 | Station Group Database Print | | | |
| | 6 | ISDN Tables Database Print | | | |
| | 7 | System Timer Database Print | | | |
| | 8 | Toll Table Database Print | | | |
| | 9 | LCR Database Print | | | |
| | 10 | Other Tables Print | | | |
| | 11 | Nation Specific Database Print | | | |
| | 12 | Flexible Button Program Print | STN_R | | |
| | 13 | Networking Data Print | | | |
| | 14 | All Database Print | | | |
| | 15 | LCD Message Print | | | |
| | | 1 Language | 00 – 15 | Nation Specific | 00 = ENG, 01 = ITA, 02 = FIN,<br>03 = DUT, 04 = SWE, 05 = DAN,<br>06 = NOR, 07 = HUN, 08 = GER,<br>09 = FRE, 10 = POR,<br>11 = SPA, 12 = KOR, 13 = EST,<br>14 = RUS, 15 = TUR |
| | | 2 Station Type | 0 – 2 | 0 | 0 = NORMAL<br>1 = LG-GAP<br>2 = LARGE |
| | 16 | Quit Print | | | |